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Report No. SA-TR11-5000

**BARREL EROSION STUDY OF
RIFLES, 5.56MM, M16 AND XM16E1.
A JOINT ARMY - AIR FORCE TEST**

**P. R. Landry
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Author

Date January 1966

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SPRINGFIELD, MASSACHUSETTS**

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REPORT: SA-TR11-5000

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BARREL EROSION STUDY OF RIFLES, 5.56MM, M16 AND XM16E1 -

A JOINT ARMY-AIR FORCE TEST

Technical Report

Landry, P. R.

Nilsson, C. E.

DA PROJECT TITLE: None

DA PROJECT: None

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ABSTRACT

Twelve rifles, 5.56mm, XM16E1 were fired to the end of their barrel bore service life. Measurements of the barrel bore were taken periodically with an air gage, and an expanding mandrel gage. It was determined that the maximum acceptable barrel bore diameter would be .2206 inches. The barrel bore was considered serviceable for either overseas or CONUS use if that diameter had not advanced forward of the origin of the rifling further than 3.625 inches. Advancement to 6.625 inches was considered the cut-off for CONUS use only, and advancement beyond 6.625 inches would constitute complete rejection of the barrel. Gage, Barrel Erosion C7799792, designed by Springfield Armory, is recommended for this purpose. Several M11 cleaning rods and .22 caliber bore brushes, 11010021, were tested and found to be inadequate. It is also recommended that several components be revised to reduce the breakage and malfunction rates and improve the reliability. Test procedures are described and results discussed.

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1. INTRODUCTION

The Rifle, 5.56mm, M16 is a rifle currently used by the U.S. Air Force, while the Rifle, 5.56mm, XM16E1 is a rifle used by the U.S. Army.

The purpose of this test was:

- a. To provide a simple, practical means of determining when the rifle barrel should be replaced, based on the erosion of the barrel bore.
- b. To test proposed design changes.
- c. To determine parts life of current design.
- d. To determine the malfunction rate and the peculiarities of the weapon resulting from extended firing.
- e. To test the Cleaning Rod, M11, and the Bore Brush, 11010021, for durability.

The test was conducted by the U.S. Air Force Marksmanship School at Lackland Air Force Base, San Antonio, Texas, under the technical supervision of the Springfield Armory, a U.S. Army Weapons Command installation.

The test results apply under the following conditions only; any departure from these conditions will significantly alter the results of the tests:

- a. A rate of fire of 20 to 30 rounds per minute.
- b. Cooling to outside ambient temperature after every 100 rounds.
- c. Alternating 100 rounds semiautomatic fire with 100 rounds automatic fire.
- d. Thorough cleaning after every 1,000 rounds.
- e. No rough handling.
- f. A temperature range of approximately 40° to 100°F.
- g. Match quality ammunition (1.1 to 1.3-inch MR at 200 yards) and firing jack used for accuracy firing.

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2. TEST RESULTS AND OBSERVATIONS

The 12 rifles were divided into three groups of weapons each. Each group contained two test weapons and two standard weapons for control. (Test and standard weapons are identified on Page 24, Para a). The weapons were fired a total of 328,000 rounds. Various points along the bore and bullet seat advance were measured at intervals specified in the test plan along with the accuracy and velocity data. The complete test data are recorded in appendices D through H. An analysis of the data revealed that enlargement of the barrel bore due to gas erosion could be related reliably to the remaining accuracy life of the weapon. This knowledge made possible the design of Gage, Barrel Erosion C7799792 for simple, inexpensive, and reliable field determination of the need to rebarrel the weapon.

An analysis of the data also revealed that neither the bullet seat advance nor changes in velocity had a reliable correlation with the resultant accuracy of the weapon.

The average number of rounds fired per rifle to achieve the rejection limit of 9-inch average for five 10-shot groups was 25,000 rounds when fired under the stated conditions. Assuming that firing in the field would be more severe than the firing schedule used in the test, it is probable that the barrel service life would be reduced to 15,000 to 20,000 rounds for the same rejection limit.

Two rifles did not exceed the rejection limit for accuracy after firing 35,000 rounds each and further testing was stopped. One rifle exceeded the rejection limits at the start of the test and had to be rebarreled for the test. The cause of the inaccuracy could not be determined. All the rifles were new and unfired for acceptance firing.

The firing resulted in 181 parts being replaced due to breakage or unserviceable conditions. (See Summary and Appendix H). The most serious breakage was the 34 bolt breakages which accounted for 19 per cent of the parts replaced. All of these failed through the cam pin hole as a result of metal fatigue. The lowest number of rounds fired to break a bolt was 2,727 rounds and the average was 6,823 rounds.

An Armory analysis of the broken bolts attributed the failures to inadequate core strength of the walls of the bolt to withstand the loads imposed. Also, tool serrations and sharp corners in wall radii of the cam pin hole were foci for localized

stress concentrations and crack initiation. This condition was aggravated by a buildup of hard chromium plate at the corner discontinuities.

During the test, it was noted that the phosphate-coated test bolts averaged more than 10,000 rounds each and only one failed. The remainder were removed due to the conditions of the test bolt carriers. This increase in bolt life is attributed to use of phosphate coating instead of hard chromium plate, thereby avoiding a condition wherein the hard chromium can be fractured easily leading to rapid propagation of the crack through the hard case and soft core of the bolt.

Twenty-six extractor springs failed and accounted for 14 per cent of the breakages. Most of the springs failed through the center coil and only a few broke through the end coils.

Twenty-two standard ejector springs were replaced and they accounted for 12 per cent of the breakages. An average of 6,639 rounds was fired before failure. The test ejector springs, GX5380, were fired an average of 7,196 rounds before failure. Inasmuch as the "fail to eject" malfunctions accounted for 42 per cent of the malfunctions, the test springs do not provide an adequate solution to the problem. (See Summary of Malfunctions and Appendix G).

Twelve action spring guide assemblies were replaced due to broken or jammed ring springs within the unit. The failure of the springs contributed to the increased shock loads in recoil and may have contributed significantly to the bolt stop "fail to function" malfunctioning which accounted for 40 per cent of the total malfunctions as well as the unintentional bolt stoppages in semiautomatic and automatic fire and the damage to the lower receiver under the bolt stop.

Bolt stop interruptions of the firing cycle occurred on all but two weapons and accounted for five per cent of the total malfunctions. This malfunction resulted when the receiver material under the bolt stop was displaced by the beating action of the bolt stop, allowing the stop to protrude into the path of an upcoming round in the magazine and thus be actuated and stop the bolt. All receivers had evidence of this damage, although two weapons did not experience the malfunctions. This can be a very significant problem when the weapons have been in field use for some time.

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The test bolt carriers made of through-hardened steel failed after about 10,000 rounds each as compared to no failures in the standard carriers. The failures were attributed to increased wear in the area where the bolt sealing rings slide in the carriers due to the reduced hardness of the test carriers as compared with the case-hardened standard carriers.

The test magazines, both 20 and 30-round magazines, functioned well and reliably; however, those magazines that did not have protective finish showed severe pitting after exposure to a brief shower, and severe corrosion of the spring.

The screws fastening the carrier key to the bolt carrier loosened after firing approximately 10,000 rounds and had to be checked, tightened and restaked where necessary every 1,000 rounds. Failure to do so would result in malfunctions and breakage of the screw heads.

The charging handle would sometimes fly to the rear in automatic fire and strike the shooter in the nose. Although this would not injure the shooter, it would startle him, and this condition should be eliminated. This malfunction would usually occur when there was a broken or jammed ring spring in the spring guide.

The weapon receivers got very dirty from firing due to the gases being vented from the bolt and carrier, and frequent cleaning was required to prevent malfunctions. The use of oil in the gas chamber only adds to the carbon formation and increased malfunctions and should be avoided.

There was only one failure of the standard firing pin retaining pin in the test and no failures of the test retaining pin.

The M11 cleaning rod and the bore brush, 11010021 (short) were evaluated as part of the weapon cleaning schedule. Both the M11 rod and the bore brush failed after 200 cycles. (A cycle is one pass of the brush and rod through the bore in one direction. The return stroke is another cycle). The rods failed by having the joints between the sections flare out and jam in the bore. The brushes were considered unserviceable when they would not clean the bore. One brush would clean the bore only once after the weapon was fired 1,000 rounds without cleaning.

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The test revealed copper fouling along the trailing side of the land. This fouling had to be removed in order to use the air gage for measuring the barrel bore. The difficulty in removing the metal fouling resulted in reduced brush life. Failure to remove the deposits results in degradation of accuracy. A long brush, .22 cal. C5504034, was also used and the longer length and stiffer bristles resulted in better cleaning; however, it was good for only two cleanings of the bore.

The test data contained in Appendices E, G and H are summarized and are included on pages 6, 7 and 8 for convenience. (Tables I, II and III).

3. CONCLUSIONS

It is concluded that:

a. The erosion of the bore can be used reliably as one means of determining the need to rebarrel a rifle.

b. A simple, inexpensive, easy-to-use gage can be designed for this purpose.

c. That both the M11 Cleaning Rod and Bore Brush, 11010021, (short) are not adequate.

d. The bolt suffered the greatest breakage rate, followed by the extractor spring, ejector spring, hammer spring, action spring guide assembly, and the extractor. These six components accounted for approximately 63 per cent of the breakages or unserviceable parts.

e. The "fail-to-eject" malfunction (42.5 per cent) and the "bolt stop" failed-to-function (40 per cent) accounted for 82.5 per cent of the total malfunctions encountered during the test.

f. There had been no appreciable loss of velocity when the weapons were rejected for loss of accuracy.

g. The test magazines GX5559, and the 30-round magazine (no number) functioned acceptably but suffered severe pitting after exposure to rain and were not acceptable for the reason. The use of a protective finish would overcome this condition.

h. The bolt carrier, GX5552, was not acceptable due to the reduced service life of 10,000 rounds as compared to the more than 25,000-round life of the standard.

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TABLE I
MALFUNCTION SUMMARY

Malfunctions (12 Guns)	Total	Percentage of Total Malfunctions
Fail to Feed	218	5
Fail to Chamber	5	-
Fail to Lock	6	-
Fail to Fire	230	5
Fail to Extract	35	-
Fail to Eject	1917	42.5
Bolt Stop Failed to Function	1798	40
Bolt Stop Interrupted Firing Cycle	215	5
Empty Cartridge Case Spin Back Into Receiver	82	1.5
Other Malfunctions	6	-
Totals	4512	100

13.2 malfunctions per 1000 rounds

TABLE II
BREAKAGE SUMMARY

<u>Part No.</u>	<u>Nomenclature</u>	<u>Total</u>	<u>Percentage of Total Parts Broken</u>
61538	Bolt	34	19
61568	Spring, Extractor	26	14
61569	Spring, Ejector	22	12
61697	Spring, Hammer	13	7
62119	Guide Assembly, Action Spring	12	6
61562	Extractor	10	5
GX5380	Spring, Extractor	9	4
61918	Disconnect	8	4
61540	Ring, Bolt	7	3
61563	Pin, Extractor	6	3
61578	Buffer Rings, Outer	6	3
GX4976	Spring, Hammer	6	3
None	Spring, Ejector (special)	5	2
61622	Sear, Automatic	3	1
61654	Pin, Trigger	3	1
61704	Pin, Bolt Cam	2	-
62274	Carrier, Bolt	2	-
61654	Pin, Hammer	1	-
61959	Lever, Selector, Safety	1	-
GX5554	Pin, Firing	1	-
GX5555	Extractor	1	-
61581	Spring, Action	1	-
61564	Spring, Ejector	1	-
GX5280	Bolt	1	-
Total		181	

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TABLE III

VELOCITY SUMMARY

Velocity at 53 ft

Gun No.	Start	Finish	Ft/Sec Diff
1	3108	3056	-52
2	3096	3053	-43
3	3088	3019	-69
4	3065	2954	-111
5	3053	3052	-1
6	3064	3070	+6
7	3055	3034	-21
8	3068	3062	-6
9	3132	3034	+2
10	3089	2995	-94
11	3082	3060	-22
12	3087	3019	-68
Avg	3082	3042	-40

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i. The hammer spring, GX4976, provided no significant increase in life.

j. The remaining test components (see listing) provided significant improvements in service life, maintainability, or reduced cost and should be adopted.

k. The parts life of the standard rifle, except for the six components or assemblies listed in "c" above, was acceptable but is not an indication of parts life when the weapon is subjected to rough usage or adverse service conditions.

l. The bolt life can be improved significantly by eliminating the hard chromium plating; however, further improvement will require redesign of the bolt to increase the wall thickness in the cam pin area.

4. RECOMMENDATIONS

It is recommended that:

a. Gage barrel erosion, C7799792, be adopted for use with the M16 and XM16E1 rifles.

b. An improved cleaning rod be designed to eliminate the deficiencies cited in test results and observations, and a longer bore brush, similar to one previously carried under FSN 1005-556-4179, with threaded end be considered for adoption.

c. The bolt be redesigned to improve the wall strength in the area of the cam pin, and to permit use of larger and/or longer ejection spring and ejector and a stronger extractor spring. The bolt assembly would have to remain interchangeable with the present bolt assembly, but the components therein would not be interchangeable.

d. The action spring guide assembly be redesigned to increase the service life of this component and to reduce the number of "bolt stop fail-to-function" and "bolt stop interrupted firing cycle" malfunctions and damage to the lower receiver caused by the loss of buffering action.

e. The following test components be adopted as standard:

(1)	GX5282	Bolt
(2)	GX5557	Ejector
(3)	GX5555	Extractor
(4)	GX5553	Carrier Key
(5)	GX5556	Pin Extractor
(6)	GX5138	Firing Pin Retaining Pin

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(7)	None	Gas Tube (Seamless)
(8)	GX5350	Ejector Slot Cover Assembly
(9)	GX5150	Hand Guard Slip Ring Sections
(10)	GX5558	Spring Assembly, Slip Ring
(11)	GX5380	Spring Ejector

f. The 30-round magazine be adopted provided that it has proper protective finish.

g. The following test items be rejected:

(1)	GX5552	Bolt Carrier
(2)	GX4976	Hammer Spring
(3)	Box Magazines 20 and 30 rounds	which have no protective finish.

h. Studies be conducted to improve retention of the carrier key screws to preclude loosening.

i. The charging handle clearance cut be lengthened rearward to reduce or eliminate the possibility of the handle being struck by the carrier key in recoil.

j. User and Maintenance Personnel be advised not to oil the gas chamber in the carrier to preclude carbon formation and subsequent malfunctioning.

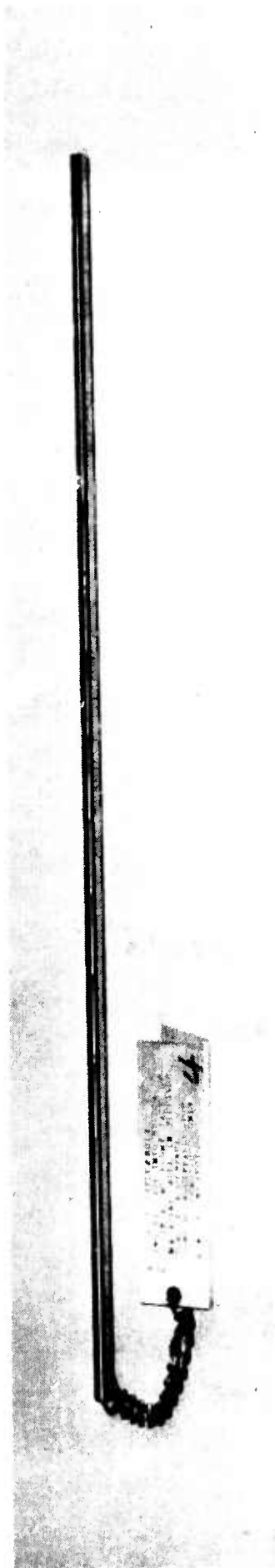
k. Coordination be effected with ammunition manufacturers on possible changes to gilding metal composition in order to reduce metal fouling.

Remarks

Two additional items, which were designed and fabricated by M/Sgt Green, USAF, were subjected to limited testing. These items were a bolt modified to accept a cut down M1 Carbine Ejector Spring and a Buffer using a helical compression spring. A photo of the Buffer is in Appendix I. Based on the satisfactory test results in both instances, it is recommended that both approaches be explored further.

Test Observer

Mr. K. Ito, Colt's Inc.



RIFLE, 5.56MM, M16 & M16E1
GAGE, BARREL EROSION, 7799792

FSN 4933-912-3409

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APPENDICES

- A.- Correspondence
- B - Test Plan
- C - List of Test Components
- D - Accuracy Data
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- H - Parts Breakage and Photographs
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APPENDIX A

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CORRESPONDENCE

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APPENDIX A

C O P Y

AMCPM-AR-15

16 October 1964

SUBJECT: Barrel Erosion Test Plan for Rifle 5.56mm XM16E1

TO: Commanding Officer
US Air Force Marksmanship School
Lackland Air Force Base
San Antonio, Texas

1. Reference telecon between Colonel Kelley, Commanding Officer, US Air Force Marksmanship School, Lackland Air Force Base, and Mr. Charles Sladek, AMCPM-AR-15, 14 October 1964.

2. Attached for your information and retention is the approved subject test plan and correspondence relative thereto.

3. Springfield Armory is preparing an ammendment to the subject test plan that will include the recommendations received from Headquarters, US Air Force (AFPTRTC), and Det 4, RDT Weapons Division, Eglin Air Force Base. A copy of this ammendment will be furnished your office.

4. Mr. Paul Landry, Springfield Armory, SWESP-REE, telephone number REpublic 96911, Ext. 6262, has been designated Test Plan Manager for the subject test.

5. The tentative starting date for test established by the Test Plan Manager is 16 November 1964. Your assistance in meeting this starting date will be appreciated by this office.

FOR THE COMMANDER:

2 Incls

1. ATWG ltr dtd 23 Sep 64
subj as abv
2. AMCPM-AR-15 ltr dtd
3 Sep 64, same subj

HAROLD W. YOUNT
Lt Colonel, GS
AR-15 Project Manager

Copies furnished:

SWESP-CPM, Mr. Hassett
ASQWW, Mr. Aumen
AFSPD-AE, Maj Jeffers

APPENDIX B

REPORT
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TEST PLAN

SPRINGFIELD ARMORY
RES & ENG DIV
25 AUGUST 1964

BARREL EROSION TEST PLAN FOR RIFLE,
5.56M: M16E1

1. PURPOSE OF TEST

- a. To establish a correlation between the seven (7) inch and nine (9) inch extreme spread accuracy limits (at 100 yds) and erosion of the Barrel.
- b. To provide a simple, practical means for the field to determine if the Barrel should be replaced. I.E.: For CONUS use or for overseas use.

2. EQUIPMENT

- a. Twelve (12) each M16E1 5.56 MM Rifles having one (1) turn in 12 inches Rifling. Six (6) of these Rifles will contain test components. These test components shall be provided by Colt's Patent Firearms.
- b. Cartridge, Ball, 5.56 MM ammunition to be used for accuracy tests. This ammunition is to have a mean radius (MR) of 1.1 to 1.3 inches at 100 yards.
- c. Cartridge, Ball 5.56 MM ammunition for function firing. This ammunition need not be accuracy ammunition, but must be manufactured to the latest specifications. (NOTE: Lots RA 1-6 and RA1-7 were set aside at Lackland AFB for this purpose).
- d. Firing stand and jack for accuracy firing. (Lackland AFB)
- e. Borescope, .22 Cal. (Lackland AFB)
- f. Lumiline screens and counter (Lackland AFB)
- g. Targets (Lackland AFB)
- h. Breechbore erosion gage (Springfield Armory)
- i. Cyclic rate-of-fire measuring equipment (Springfield Armory)
- j. Keyhole template (Springfield Armory)

3. Procedure

- a. Weapons will be forwarded by contractor to:

Transportation Officer
U.S. Springfield Armory
Springfield, Mass.
ATTN: For Commanding Officer, SWESP-CPM (Hassett)

PAGE TWO

- b. Lackland AFB shall ship one case (2000 rounds) of "accuracy" ammunition to:

Transportation Officer
U.S. Springfield Armory
Springfield, Mass.
ATTN: For Commanding Officer, SWESP-REE (LANDRY)

- c. Weapons will be inspected for safety factors prior to firing.

- d. The Armory shall take and record breechbore measurements, bore measurements, velocity at 15 feet and 70⁰F, and cyclic rate of fire for each rifle. Copy of the data shall be forwarded to:

Commanding Officer
USAF Marksmanship School
Lackland AFB
San Antonio, Texas
ATTN: T. Sgt V. Duchek

- e. The weapons, breechbore gage, cyclic rate-of-fire measuring equipment, and key-hole template shall be forwarded by the Armory to:

Commanding Officer
USAF Marksmanship School
Lackland AFB
San Antonio, Texas
ATTN: Test Section (M/Sgt Greene)

- f. It is recommended that the twelve (12) Rifles be separated into three (3) groups of four (4) rifles each and the groups labeled "A", "B", and "C". Each group should consist of two (2) control rifles and two (2) test rifles. Group "A" rifles should be fired 6000 rounds before group "B" rifles are started along the schedule and group "A" rifles should be fired 12,000 rounds before group "C" is started along the schedule. This will permit changing the test requirements and/or scheduled frequency of inspection as the test progresses based on findings of group "A" weapons.

- g. Tests shall be conducted by USAF Marksmanship School as indicated in the following test procedures and schedule.

4. TEST PROCEDURES

a. Accuracy Test

- (1) Ammunition used shall be "accuracy" ammunition and the same lot shall be used throughout the test program for all accuracy tests.
- (2) The weapon shall be cooled and cleaned prior to firing the accuracy test.

TEST PROCEDURES (cont'd)

- (3) Ten (10) fouling shots shall be fired immediately prior to firing the accuracy test.
- (4) ~~Five~~ ^{Five} ten (10)-shot slow fire (semi-automatic) target shall be fired at 100 yards range and at 300 meters range at the intervals specified in the schedule.
- (5) The 100 yard range shall be an indoor range. The 300 meter range shall be an outdoor range.
- (6) All accuracy firing shall be done from the firing jacks.
- (7) Measure and record the extreme spread (ES) of each ten (10) shot group, Record average of ES for the five(5) ten-shot groups for 100 yard firing.
- (8) Measure extreme vertical spread (EV) only for 300 meter accuracy firing.
- (9) Record all "flyers". A "flyer" is defined as one shot hole which is located away from the nearest of the other nine shot holes by a distance equal to the ES of the other nine (9) shots.

b. Velocity Test

- (1) Condition "accuracy" ammunition for two (2) hours at 70° ± 2° F immediately prior to firing velocity tests.
- (2) Fire ten (10) shots slow fire, through Lumiline screens and record data after each shot.
- (3) Convert time data into velocity by dividing the distance between the Lumiline screens by the time for the projectile to pass through the two screens. Record each reading and average of ten (10) shots. Gunners should take precautions to preclude hitting the Lumiline screens.

c. Yaw Test (Simultaneously with accuracy test)

- (1) Bullet holes in the accuracy target shall be checked for yawing of projectiles. The point at which 20% of the shots indicate yawing in excess of 15°, as determined by yaw template, shall be recorded for both 100 yard and 300 meter accuracy tests.

d. Rate-of-Fire For Function Firing

- (1) The rate of fire for function firing shall be twenty (20) rounds per minute. Semi-automatic fire shall be approximately one shot every three (3) seconds for 100 rounds. Automatic fire shall be a single burst of twenty (20) rounds with five (5) full magazines fired at one minute intervals.

e. Cooling

The weapons shall be cooled to ambient temperature after firing each 100 rounds. The barrel is considered to be at ambient temperature when the hand can be placed and kept on the exposed portion of the barrel without discomfort. Use of water or water sprays to cool the barrels is prohibited.

f. Barrel Inspection

Barrel bores will be gaged at one inch increments from the muzzle (flash suppressor muzzle) using the air gage, at intervals specified in the master schedule. The bore shall also be visually inspected, using the borescope and changes to the bore shall be recorded.

g. Termination of Test

- (1) Test shall be terminated at the discretion of the range officer whenever safety of the personnel may be impaired by the tests.
- (2) Test shall be tentatively terminated pending further instructions from AMCPM-AR-15 when each weapon individually fires a single ten (10) shot target in which the ES is nine (9) inches or larger, at 100 yards range.
- (3) Test may be terminated at the discretion of the AMCPM-AR-15.
- (4) AMCPM-AR-15 shall be notified when tests are terminated.

h. Progress Reports

- (1) USAF Marksmanship School shall forward (USAF) AR-15 Data Sheets (copy inclosed) on a weekly basis to:

Commanding Officer
U.S. Springfield Armory
1 Federal Street
Springfield, Mass. 01101
ATTN: SWESP-RES (NILSSON)

- (2) Collect telephone calls to Springfield Armory or AMCPM-AR-15 are authorized when guidance or technical assistance is required to preclude delay in tests or unnecessary costs due to delays.

i. Final Report

- (1) Final Report shall be prepared jointly by Air Force and Army technical representatives.
- (2) Distribution of the final report shall be as directed by Army and Air Force authorities.

j. Final Disposition of Weapons, Gages and Instruments

- (1) Upon completion of tests, the twelve (12) rifles, breechbore gage, rate-of-fire instruments, broken or damaged components and all other gages, tools or instruments loaned by the Springfield Armory for the tests shall be returned to:

Transportation Officer
U.S. Springfield Armory
Springfield, Mass.
ATTN: SWESP-CPM (HASSETT)

k. Ammunition Replacement

The ammunition which has been expended shall be replaced by the U.S. Army after completion of test. A letter from USAFMS, listing the ammunition expended in the test and the address for shipping the replacement ammunition should be forwarded to:

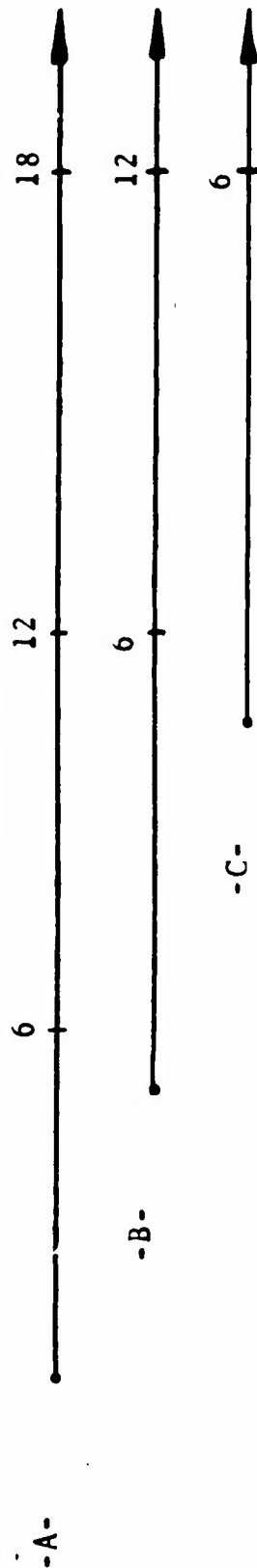
Commanding Officer
U.S. Springfield Armory
1 Federal Street
Springfield, Mass. 01101
ATTN: SWESP-CPM (HASSETT)

APPENDIX B

MASTER SCHEDULE																					
THOUSANDS OF ROUNDS																					
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
CLEAN	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Gage Breech Bore	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Accuracy 100 yd-300M	X			X			X		X		X		X		X		X		X		X
Yaw Test	X			X			X		X		X		X		X		X		X		X
Velocity	X			X			X		X		X		X		X		X		X		X
Rate of Fire	X			X			X		X		X		X		X		X		X		X
Bore Inspection	X						X				X				X		X		X		X

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GROUP SCHEDULE



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Springfield Armory
Res & Eng Div
1 Nov 64

AMENDMENT 1 TO TEST PLAN FOR RIFLE,
5.56 MM, XM16E1

The following changes are hereby made to the Barrel Erosion Test Plan for Rifle, 5.56MM, M16E1, dated 25 Aug 63:

Change: Par 2c to read as follows:

"Cartridge, Ball 5.56MM, ammunition for function firing, this ammunition need not be "accuracy" ammunition, but must be manufactured to latest specifications. Ammunition available from current producers shall be used in function firing portion of test program.

Add: Par 2k:

"Air gage spindle (5.56MM) and handle" (Springfield Armory).

Change: Par 3d to read as follows:

"The Armory shall take and record breech bore measurements, headspace, velocity at 15 feet and 70°F, and cyclic rate of fire for each rifle prior to shipping weapons to Lackland AFB. Copy of the data --- etc."

Change: Par 3e to read as follows:

"The weapons, breech bore gage, cyclic rate of fire measuring equipment, air gage spindle and handle and keyhole template shall be ---- etc."

Change: Par 4a(4) to read as follows:

"Five ten (10) shot slow --- etc."

Add: To par 4d:

"(2) Function fire alternating 100 rounds of semi-automatic fire with 100 rounds automatic fire until the required 1000 round increment is reached. The 1000 round increment includes all accuracy, velocity and rate of fire testing.

Change: Par 4h(1) to read as follows:

"USAF Marksmanship School shall forward weekly progress reports to - 3 copies to:

Det 4, RDT
Weapons Division (ATWO)
Elgin AFB, Florida
Attn: Mr. W. Aumen Jr.

APPENDIX B

REPORT
SA-TR11-5000

3 copies to:
Commanding General
Hq. Army Weapons Command
Rock Island, Illinois
Attn: AMCPM-AR15

3 copies of weekly report and one copy of data sheets
Commanding Officer
U. S. Army, Springfield Armory
1 Federal Street
Springfield, Mass.
Attn: SWESP-REE (Landry)

Additional copies, as required, may be distributed.

Add: Par 41:

1. Function Firing Ammunition

Ammunition used for function firing shall be taken from at least two different lots from as many different manufacturers as is practicable.

Add: Par 5:

(1) Evaluation of Cleaning Rod, M11 Part No. 11010020 and Cleaning Brush Part No. 11010021.

(2) Purpose: To report on the adequacy of the cleaning rod and brush based on actual usage in test.

(3) One cleaning rod and one brush shall be used to perform the cleaning of the rifles used in the barrel erosion test until the rod and/or brush fail. The rod and/or brush shall be replaced by new units upon failure and test continued until completion of barrel erosion test. The following information shall be recorded:

(a) Number of strokes required for failure of either brush or rod. (Note: Pushing the rod through the length of the barrel and returned is considered 2 strokes.)

(b) The mode of failure, i.e. "fracture of rod at joint," "bending of rod," "brush worn out"--- etc.

(c) User's comments on rod, brush and actual use.

(d) User's recommendations for changes

Add: Par 6:

a. Six of the rifles to be used in the test have been modified to include components or assemblies and 200 magazines, furnished by Colt's Patent Firearms for the purpose of additional test verification by the Government. The "test" rifles and standard rifles are listed below:

TEST	STANDARD
105083 - 109085	113821 - 121654
108860 - 122429	118603 - 122033
109068 - 123225	121184 - 122994

The test components are as listed below:

<u>Test Part No.</u>	<u>Nomenclature</u>	<u>Std Part No.</u>	<u>Rev</u>
GX 5282 -Rev 1	Bolt	61538	10
GX 5557	Ejector	61564	11
GX 5380	Ejector Spring	61569	2
GX 5555	Extractor	61562	5
GX 5553	Key, Bolt Carrier	61547	9
GX 5556	Pin, Extractor	61563	B2
GX 5554	Pin, Firing	62294	0
GX 5138	Pin, Firing Pin Ret.	61561	4
GX 4976	Spring, Hammer	61697	4
GX 4753	Spring, Action	61581	E3
GX 5552	Carrier, Bolt	61544	11
GX 5350	Ejector Slot Cover Assy	62112	0
GX 5150	Hand Guard Slip Ring Sect	61961	0
GX 5558	Spring, Weld Assy	61962	3
*----	Assembly, Gas Tube	61645	-
*	302 Seamless, Stainless Steel Tube		
GX 5559	Box, Magazine	61922	9 **
GX 5560	Box, Magazine	61922	9 **

** Quantity, 100 each

b. Test components shall remain in the same weapons as when shipped from Springfield Armory.

c. Standard components shall be used for replacement of test components which fail.

d. All magazines shall be numbered and shall be used in sequence throughout the test.

Springfield Armory
Eng Br - Res & Eng Div
2 February 1965

AMENDMENT 2 TO TEST PLAN FOR RIFLE, 5.56MM, XM16E1

The following changes are hereby made to the Barrel Erosion Test Plan for Rifle, 5.56MM, XM16E1, dated 25 August 1964 and Amendment 1, dated 1 November 1964.

Delete: Paragraph 2i
"cyclic rate-of-fire measuring equipment (Springfield Armory)

Add to Paragraph 4d:

(3) Group C rifles only. Use 12 each 30-round test magazines along with the Standard and test 20-round magazines. For function firing, use one 30-round magazine followed by a 20-round magazine from Group A Magazines followed by a 30-round magazine and then a 20-round magazine from group B. The semi-automatic fire shall be approximately one shot every three (3) seconds for 100 rounds. Automatic fire shall be a single burst of thirty rounds with the thirty-round magazines followed by an interval of one and one-half minute before firing a single twenty-round burst from the twenty-round magazine. The interval after firing a twenty-round burst shall be one minute. . .

Change: Master Schedule

- a. Delete: Rate-of-fire schedule
- b. Change: 300M accuracy schedule.

Eng Br - Res & Eng Div
2 February 1965

AMENDMENT 3 TO TEST PLAN FOR RIFLE, 5.56MM, XM16E1

MASTER SCHEDULE
THOUSANDS OF ROUNDS

0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20

CLEAN

X X

Gage

Breech Bore

X X

Accuracy
100 yd

X X

Accuracy 300M

X X

Yaw Test

X X

Velocity

X X

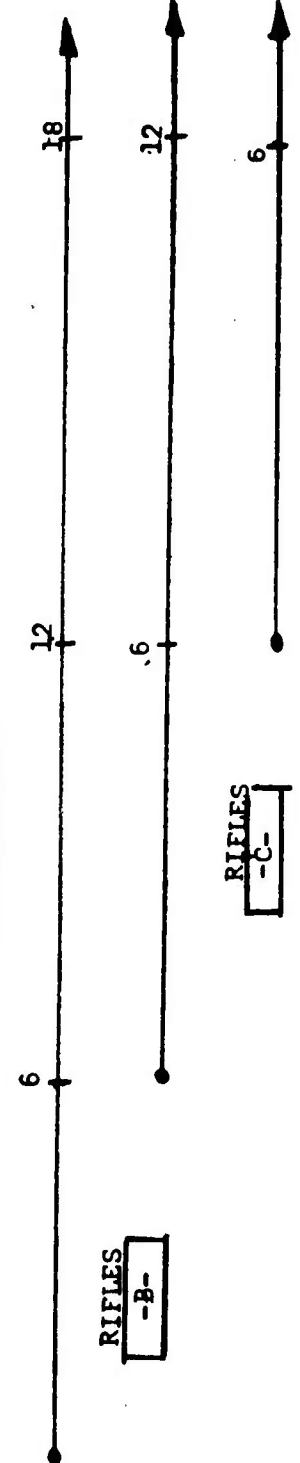
Bore Inspection

X X

RIFLES
-A-

GROUP SCHEDULE

APPENDIX B



Springfield Armory
Eng Br - Res & Eng Div
1 Mar 65

AMENDMENT 3 TO TEST PLAN FOR RIFLE, 5.56MM, XM16E1

The following change is hereby made to the Barrel
Erosion Test Plan for Rifle, 5.56MM, XM16E1 dated 25 Aug
64 and ammendments 1 and 2.

Delete: Accuracy schedule 300 M.

Change: Master schedule.

Reason: Limited availability of 300 M range
caused excessive delay to test.

RIFLE TEST DATA
Rifle, 5.56MM, XM16E1

Gun No.	Serial No.	Test Group	Standard or Test
1	108860	A	Test
2	123226	A	Test
3	118603	A	Std
4	122033	A	Std
5	113821	B	Std
6	122994	B	Std
7	121654	C	Std
8	121185	C	Std
9	109068	B	Test
10	105083	B	Test
11	109085	C	Test
12	122429	C	Test

Ammunition Data

Accuracy ammunition Lot RA 1-5

Function Firing ammunition Lots RA 1-6

RA 1-7, WCC 6022 and WCC 6026

APPENDIX C

REPORT
SA-TR11-5000

TEST COMPONENTS

TEST COMPONENTS

<u>Part No.</u>	<u>Nomenclature</u>	<u>Change</u>
GX 5282	Bolt	Phosphate finish ILO Electrolyze
GX 5557	Ejector	" " " "
GX 5555	Extractor	" " " "
GX 5553	Carrier Key	" " " "
GX 5556	Pin, Extractor	" " " "
GX 5554	Pin, Firing	" " " "
GX 5138	Firing Pin Retaining Pin	Cotter pin design
61789	Gas Tube Assembly	Seamless material
GX 5350	Ejector Slot Cover Assy	Riveted lug on cover
GX 5150	Hand Guard Slip Sec	Lighter spring loads
GX 5558	Spring Assy, Slip Ring	Load Slip ring
GX 5559	Box, Magazine	No anodize, had electro-film, closed feed lips
GX 5560	Box, Magazine	Anodized, no electro-film, closed feed lips
NONE	Box, Magazine	30-round magazine, closed feed lips
GX 5380	Spring, Ejector	Lower Stresses
GX 5552	Carrier, Bolt	4140 Steel
GX 4976	Spring, Hammer	Larger Loops

APPENDIX D

REPORT
SA-TR11-5000

ACCURACY DATA

REPORT
SA-TR11-5000

APPENDIX D

ACCURACY AT 100 YARDS
(AVERAGE EXTREME SPREAD OF FIVE 10 SHOT GROUPS MEASURED IN INCHES)

ROUNDS FIRED	GUN NUMBER											
	1	2	3	4	5	6	7	8	9	10	11	12
0	3.4	3.2	3.3	2.4	2.8	2.6	2.7	2.5	3.0	4.2	2.7	2.4
3,000	2.4	2.4	3.2	3.5	3.1	4.0	3.5	3.6	3.2	4.0	4.8	3.5
6,000	2.7	2.9	2.9	2.8	3.0	2.6	3.6	2.9	3.2	3.2	3.6	3.4
8,000	2.7	3.0	2.4	2.5	2.8	2.5	3.8	3.3	4.1	3.5	4.2	3.5
10,000	2.8	2.8	2.8	2.8	2.5	2.6	4.4	3.2	2.7	3.0	6.8	2.7
12,000	3.0	2.7	3.0	3.2	2.6	2.5	3.3	4.6	2.9	4.0	3.9	2.4
13,000	3.2	2.3	3.5	2.8	3.3	3.6	3.4	7.6	3.2	5.6	3.6	3.7
14,000	2.6	2.9	4.2	3.0	3.0	2.6	4.7	5.6	4.3	8.0	4.9	7.1
15,000	2.5	3.4	5.5	3.5	3.0	3.2	4.4	5.4	6.3	5.5	4.2	4.6
16,000	3.2	3.1	5.7	2.9	3.2	2.7	5.1	5.6	6.0	7.9	4.2	3.5
17,000	2.8	3.7	2.9	4.5	3.7	5.9	5.0	6.6	3.7	6.8	9.7	7.1
18,000	3.2	3.1	3.2	3.6	3.5	4.0	6.3	9.6	6.1	4.6	7.5	7.5
19,000	3.1	3.0	3.8	4.5	3.2	6.3	4.9	7.5	8.9	-	3.5	4.5
20,000	3.6	3.7	4.7	3.9	4.4	4.4	5.5	7.4	7.8	-	8.3	6.6
21,000	2.8	4.7	4.3	4.8	8.5	4.9	4.6	<u>6.5</u>	4.7	-	7.5	5.4
22,000	3.7	5.4	4.9	6.6	4.4	7.7	<u>11.5</u>	**	5.1	-	4.7	6.3
23,000	4.5	5.4	8.7	7.9	6.3	8.5	-	-	9.1	-	6.3	**
24,000	9.0	7.3	6.3	7.1	5.9	6.1	-	-	7.5	-	6.1	-
25,000	6.1	3.9	5.2	9.4	6.8	6.9	-	-	7.9	-	**	-
26,000	6.2	5.7	5.7	6.2	5.8	8.4	-	-	11.1	-	-	-
27,000	10.5	5.0	7.0	6.9	5.8	6.1	-	-	9.9	-	-	-
28,000	-	6.0	3.6	4.6	8.6	4.8	-	-	-	-	-	-

APPENDIX D

REPORT
SA-TR11-5000

ACCURACY AT 100 YARDS (Cont'd)
(AVERAGE EXTREME SPREAD OF FIVE 10 SHOT GROUPS)

ROUNDS FIRED	GUN NUMBER												AVG
	1	2	3	4	5	6	7	8	9	10	11	12	
29,000	-	4.8	6.9	**	9.0	<u>6.1</u>	-	-	-	-	-	-	
30,000	-	<u>6.2</u>	<u>6.8</u>	-	4.0	**	-	-	-	-	-	-	
31,000	-	4.9	5.8	-	7.6	-	-	-	-	-	-	-	
32,000	-	6.5	<u>6.8</u>	-	5.6	-	-	-	-	-	-	-	
33,000	-	5.3	6.3	-	6.0	-	-	-	-	-	-	-	
34,000	-	5.9	5.0	-	6.4	-	-	-	-	-	-	-	
35,000	-	7.1	4.2	-	5.9	-	-	-	-	-	-	-	

■ Ricochet

** Group not measurable.

Shaded number means flyer not measurable.

Ricochet off tunnel wall.

ACCURACY AT 100 YARDS
(MINIMUM SPREAD OF SINGLE GROUP MEASURED IN INCHES)

ROUNDS FIRED	GUN NUMBER											
	1	2	3	4	5	6	7	8	9	10	11	12
0	2.0	2.1	2.8	1.7	2.3	2.1	2.3	2.1	2.5	3.7	2.0	2.0
3,000	1.6	1.8	2.5	3.2	2.7	2.9	2.7	3.0	2.8	2.9	3.9	3.0
6,000	2.1	2.0	2.1	1.9	2.4	2.1	3.2	2.5	2.6	2.8	2.8	2.7
8,000	2.3	2.2	1.8	1.8	2.0	1.9	2.7	2.0	3.0	2.5	3.5	2.6
10,000	1.9	1.9	1.9	2.4	1.6	2.1	3.2	2.4	2.1	1.7	2.5	2.0
12,000	2.2	2.4	2.1	1.8	1.7	2.2	2.7	3.1	1.6	2.8	3.3	1.6
13,000	2.3	1.9	2.6	2.2	2.2	2.4	2.3	4.9	2.9	4.0	2.8	2.6
14,000	1.7	2.5	3.5	2.4	2.0	2.0	2.5	3.5	3.2	7.1	4.2	5.2
15,000	2.0	3.0	4.5	2.8	2.0	2.5	2.9	3.0	3.2	3.5	3.0	3.1
16,000	2.8	2.5	4.6	2.1	2.9	1.6	4.2	3.2	2.1	5.6	3.3	2.8
17,000	2.3	2.6	2.3	3.6	2.5	4.0	2.5	3.0	2.7	4.8	5.2	3.1
18,000	2.6	2.5	2.5	2.9	2.5	2.9	4.4	7.1	2.2	2.8	4.2	4.2
19,000	2.3	1.7	3.1	2.5	2.0	4.5	3.4	4.0	4.9	**	2.9	2.9
20,000	2.4	3.2	2.7	3.5	3.6	2.5	2.7	4.4	4.7	-	5.0	4.7
21,000	2.0	3.9	3.0	3.6	4.9	3.4	2.9	4.7	3.0	-	4.7	3.4
22,000	2.9	4.3	3.9	4.5	2.9	6.3	7.3	-	4.1	-	4.1	3.4
23,000	2.8	4.5	6.9	5.9	4.7	6.7	-	-	5.8	-	4.9	3.6
24,000	6.6	4.8	4.9	4.5	5.3	4.7	-	-	5.5	-	4.4	-
25,000	4.1	2.8	3.1	7.5	3.3	4.7	-	-	6.4	-	4.6	-
26,000	3.9	4.1	3.5	4.1	2.9	7.3	-	-	5.2	-	-	-
27,000	8.5	3.3	4.1	2.6	4.0	3.5	-	-	4.8	-	-	-
28,000	-	4.1	2.6	3.7	7.2	2.6	-	-	-	-	-	-

ACCURACY AT 100 YARDS (Cont'd)
(MINIMUM SPREAD OF SINGLE GROUP)

ROUNDS FIRED	GUN NUMBER											
	1	2	3	4	5	6	7	8	9	10	11	12
29,000	-	4.2	4.8	6.4	4.8	3.9	-	-	-	-	-	-
30,000	-	5.7	4.8	-	2.1	3.5	-	-	-	-	-	-
31,000	-	3.8	3.6	-	5.8	-	-	-	-	-	-	-
32,000	-	4.5	2.6	-	2.8	-	-	-	-	-	-	-
33,000	-	4.4	3.4	-	4.9	-	-	-	-	-	-	-
34,000	-	2.8	4.2	-	3.1	-	-	-	-	-	-	-
35,000	-	3.7	3.3	-	3.6	-	-	-	-	-	-	-

**** Group not measurable.**

ACCURACY AT 100 YARDS

(MAXIMUM SPREAD OF SINGLE GROUP MEASURED IN INCHES)

ROUNDS FIRED	GUN NUMBER											
	1	2	3	4	5	6	7	8	9	10	11	12
0	4.7	4.5	3.4	3.1	3.5	3.5	2.9	3.4	3.5	5.0	3.1	2.7
3,000	4.1	2.7	4.1	3.6	3.8	5.2	4.6	4.3	4.3	5.4	6.1	4.5
6,000	3.2	3.2	4.0	3.7	3.6	2.9	4.6	3.4	4.0	3.6	4.9	4.4
8,000	3.5	4.0	2.7	3.3	4.2	2.8	5.2	4.7	5.0	4.7	4.7	4.9
10,000	3.7	3.7	3.7	3.5	3.4	3.2	5.9	4.4	3.4	4.3	4.9	3.1
12,000	4.0	1.6	3.9	4.4	3.3	2.8	4.1	5.4	4.3	4.8	4.6	3.3
13,000	3.6	2.5	5.0	4.0	4.1	5.0	4.3	9.8	4.0	7.5	4.5	4.8
14,000	3.5	3.3	4.8	3.8	3.8	3.2	7.9	6.3	5.2	9.4	6.7	8.5
15,000	3.0	3.8	7.6	4.1	4.1	5.4	6.0	8.6	8.2	6.9	5.0	6.4
16,000	3.8	4.3	6.9	3.9	3.3	3.3	6.3	9.0	10.6	12.4	5.4	3.9
17,000	3.2	4.3	3.8	5.3	4.3	9.3	6.7	13.9	5.4	9.6	<u>20.2</u>	18.1
18,000	4.7	3.4	5.0	4.5	5.0	5.3	8.6	11.1	8.5	6.4	14.4	10.4
19,000	4.6	5.1	5.1	7.5	5.6	8.1	6.9	10.5	12.0	**	4.0	6.3
20,000	5.8	4.2	6.6	4.2	6.4	6.2	8.2	11.6	9.2	--	18.5	8.7
21,000	3.3	5.5	5.8	7.0	10.3	6.9	6.5	**	7.0	--	11.0	7.9
22,000	4.1	7.2	6.3	8.4	5.4	9.0	**	--	7.7	--	5.3	9.8
23,000	4.9	5.9	9.7	10.2	10.7	9.4	--	--	11.0	--	8.7	**
24,000	12.8	10.6	8.6	10.8	10.4	9.3	--	--	10.0	--	<u>24.9</u>	
25,000	9.1	4.6	7.5	10.5	12.4	9.0	--	--	9.3	--	**	
26,000	8.8	8.6	7.6	9.8	8.0	10.5	--	--	17.3	--	--	
27,000	13.4	7.9	14.5	8.5	8.6	10.0	--	--	12.4	--	--	
28,000	--	9.2	4.4	5.3	11.4	9.0	--	--	--	--	--	
29,000	--	5.9	8.3	**	15.7	**	--	--	--	--	--	

APPENDIX D

REPORT
SA-TR11-5000ACCURACY AT 100 YARDSMAXIMUM SPREAD OF SINGLE GROUP

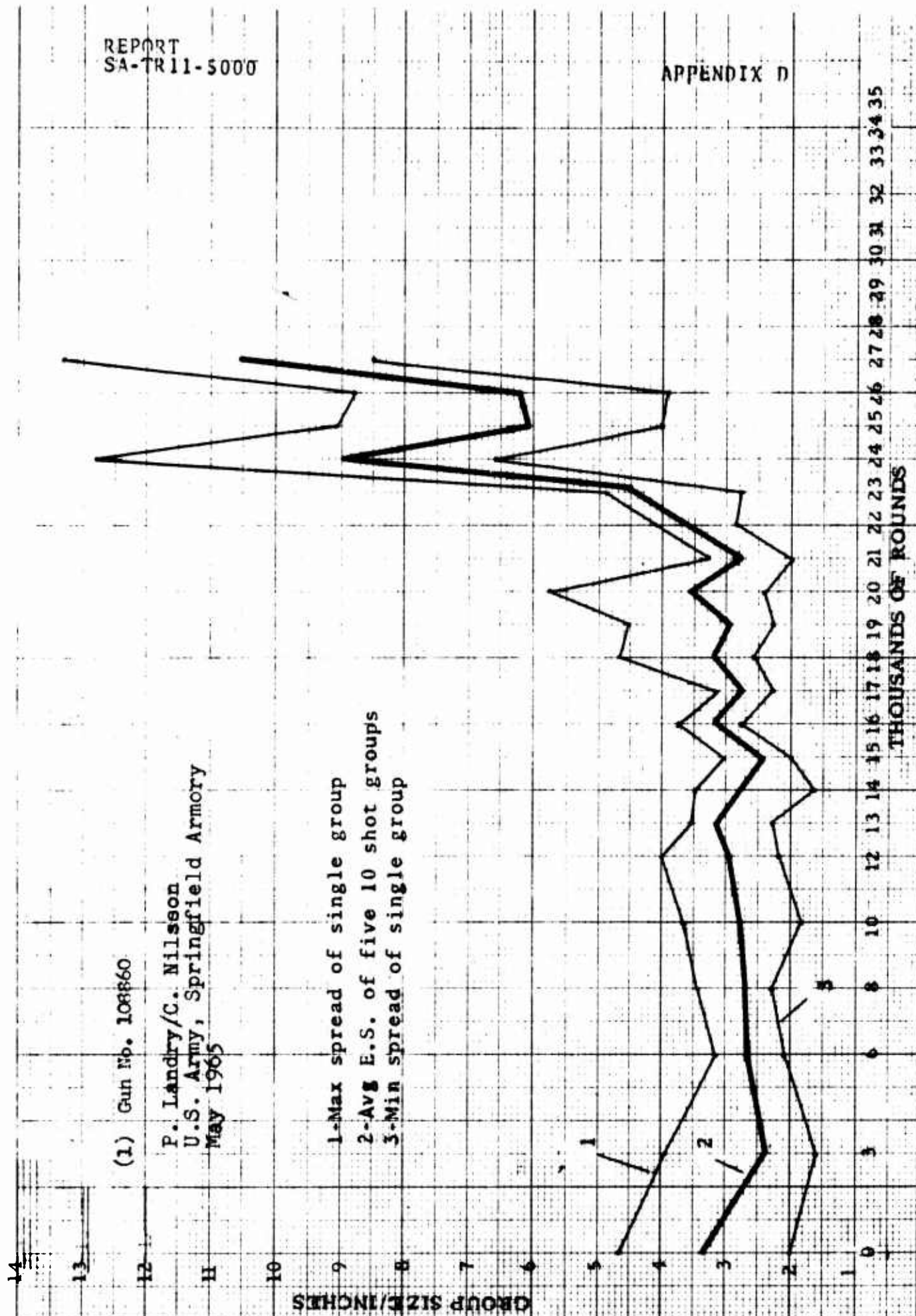
GUN NUMBER

ROUNDS FIRED	1	2	3	4	5	6	7	8	9	10	11	12
30,000	--	**	**	--	6.7	**	--	--	--	--	--	--
31,000	--	5.9	10.8	--	8.6	--	--	--	--	--	--	--
32,000	--	**	11.00	--	8.6	--	--	--	--	--	--	--
33,000	--	6.13	15.5	--	7.9	--	--	--	--	--	--	--
34,000	--	8.7	6.1	--	9.5	--	--	--	--	--	--	--
35,000	--	10.7	5.2	--	9.8	--	--	--	--	--	--	--

** GROUP NOT MEASURABLE

SHADED NUMBER MEANS FLYER NOT MEASURABLE

■ Ricochet off tunnel wall.



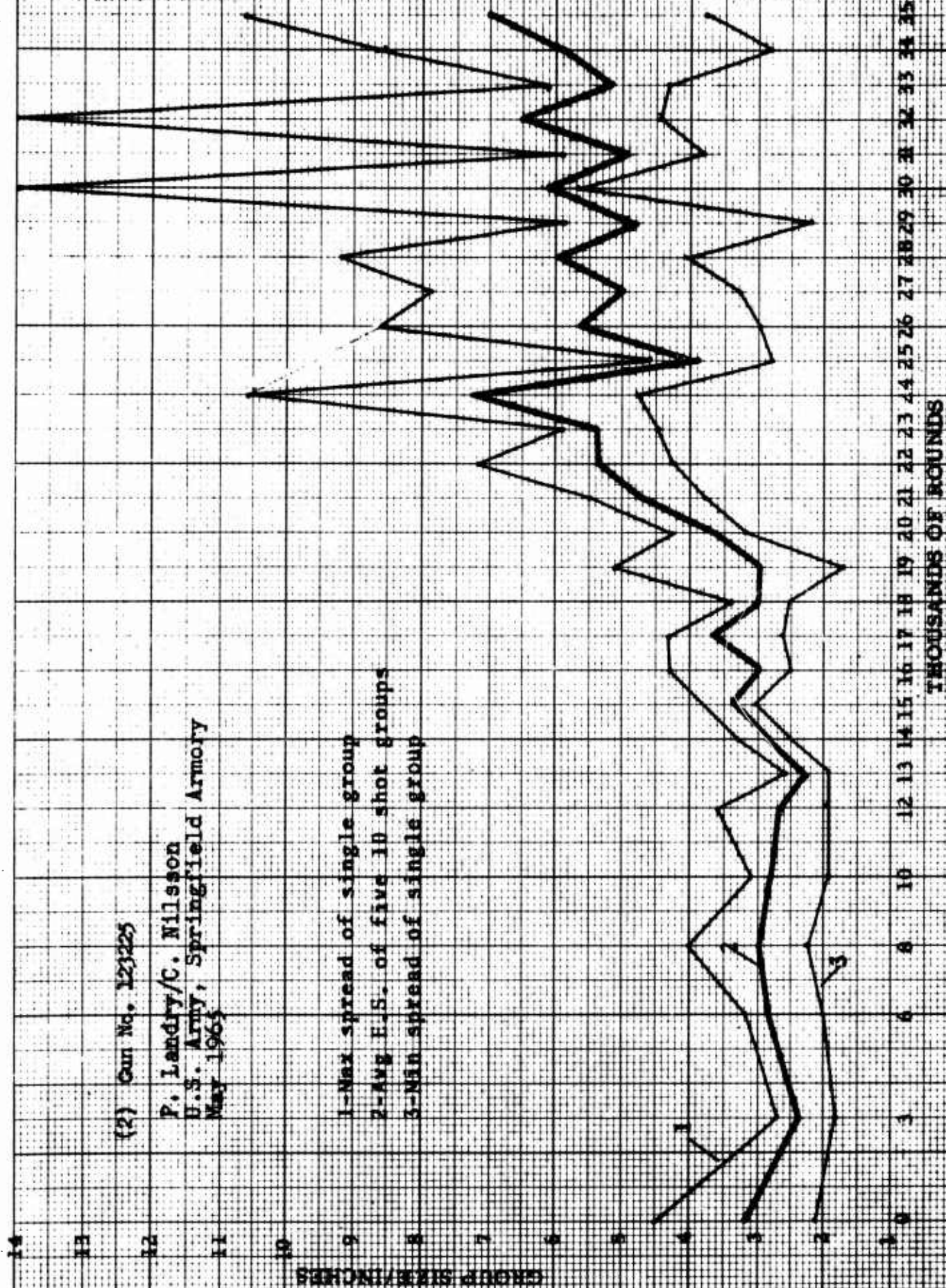
APPENDIX D

REPORT
SA-TR11-5000

(2) Gun No. 123225

P. Landry/C. Nilsson
U.S. Army, Springfield Armory
May 1965

- 1-Max spread of single group
- 2-Avg E.S. of five 10 shot groups
- 3-Min spread of single group



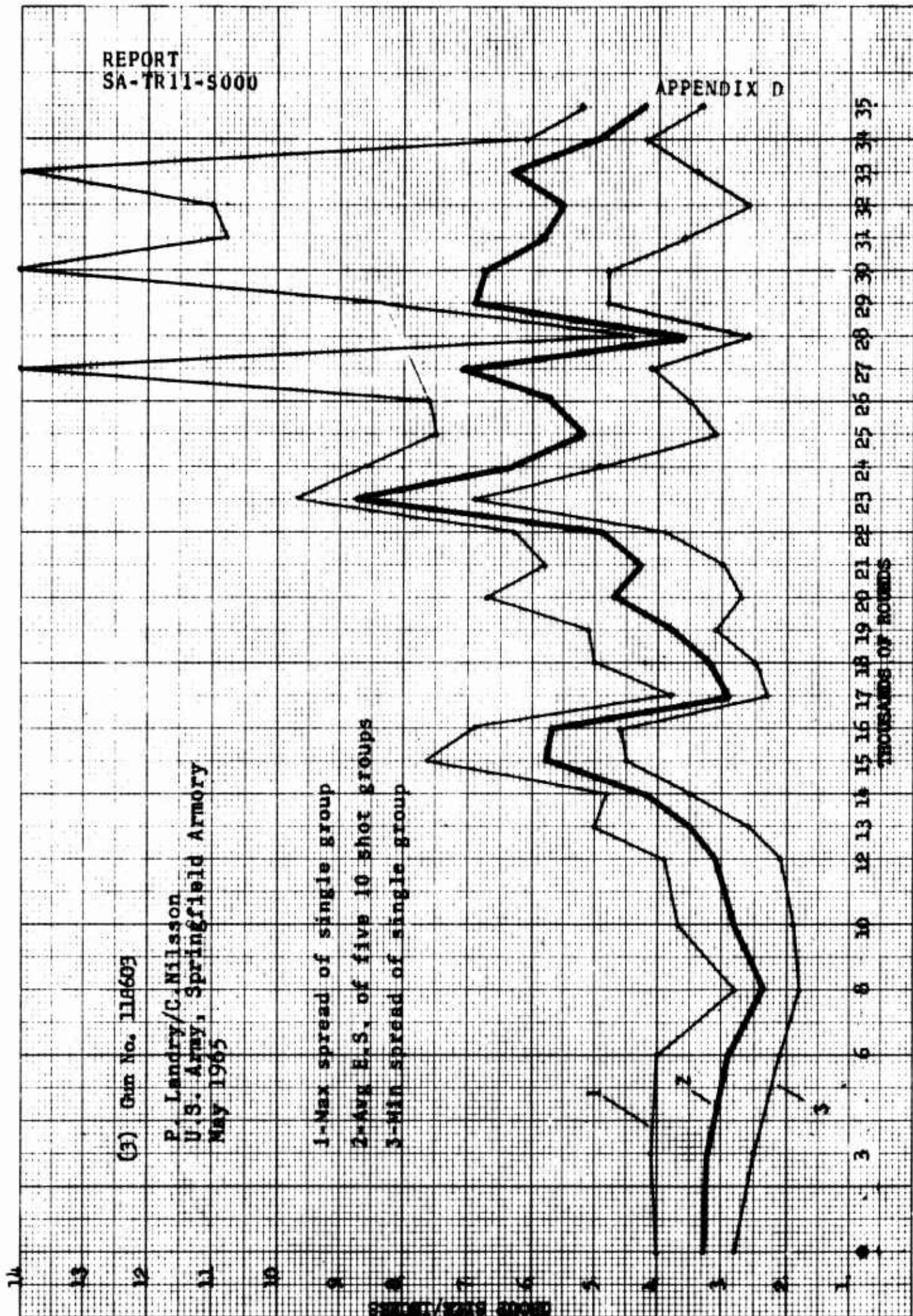
REPORT
SA-TR11-5000

APPENDIX D

(3) Gun No. 118603

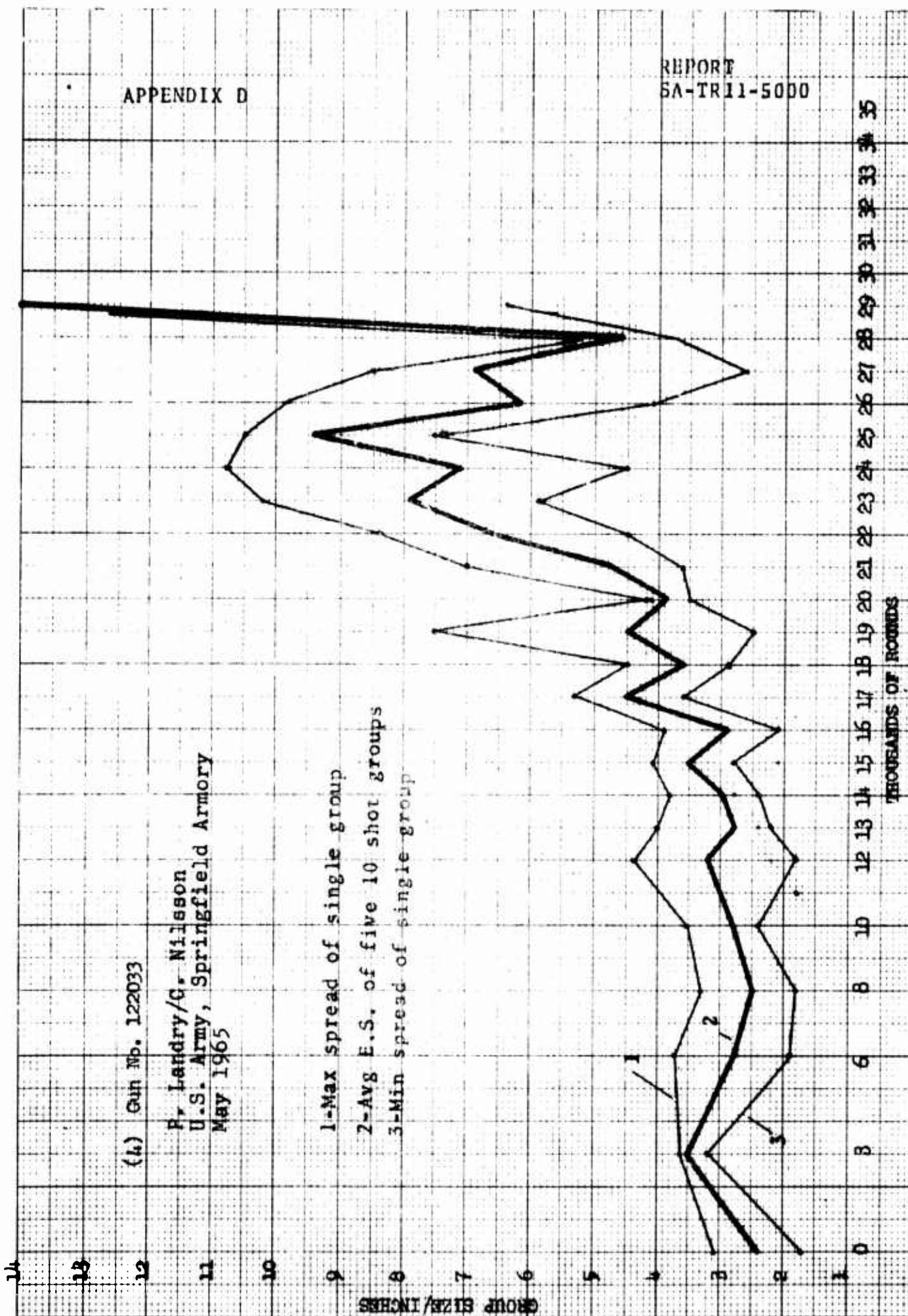
P. Landry/C. Nilsson
U.S. Army, Springfield Armory
May 1965

- 1-Max spread of single group
- 2-Avg E.S. of five 10 shot groups
- 3-Min spread of single group



APPENDIX D

REPORT
SA-TR11-5000



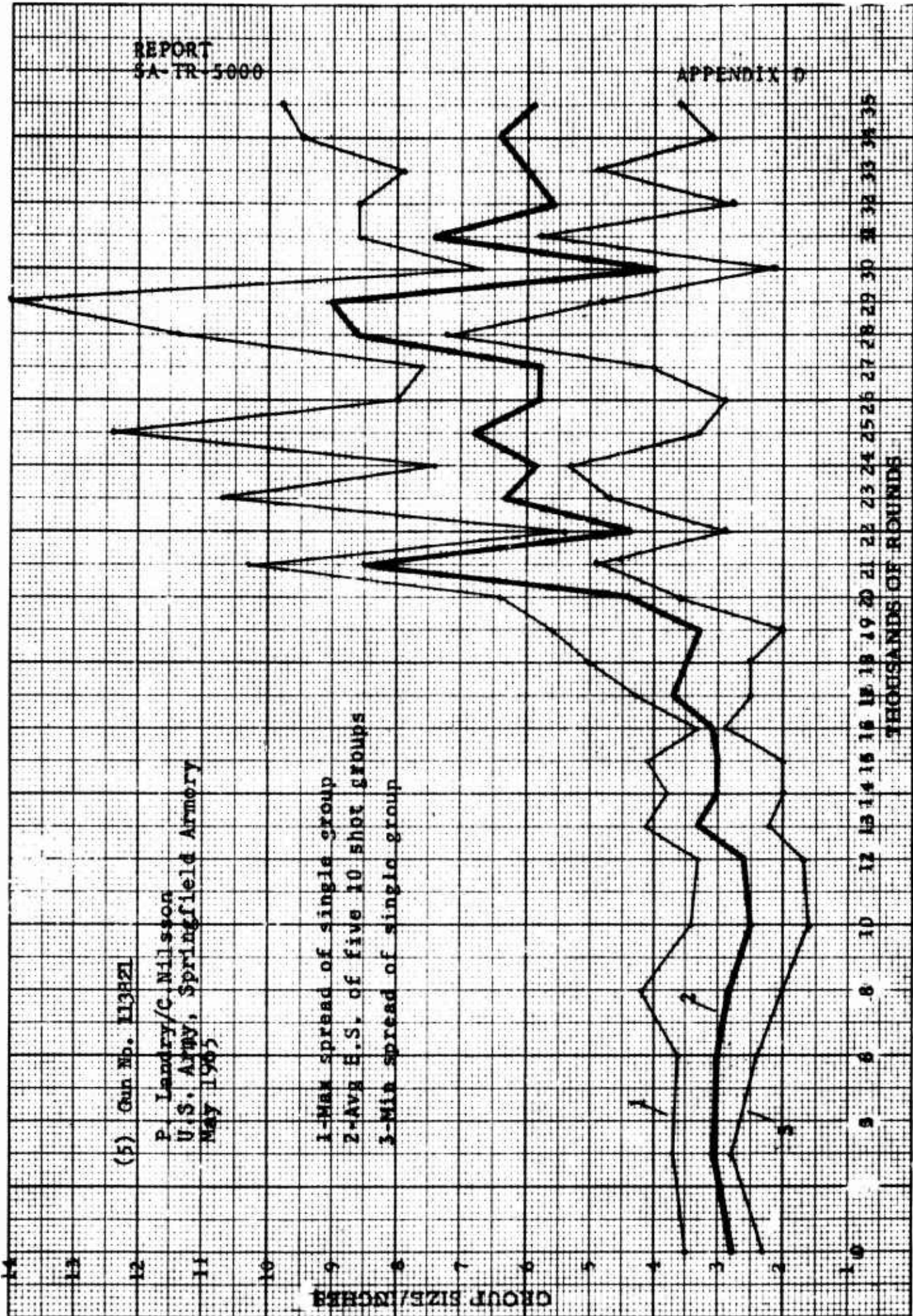
REPORT
SA-TR-5000

APPENDIX D

(5) Gun No. M3H2L

P. Landry/C. Nilsson
U.S. Army, Springfield Armory
May 1965

1-Max spread of single group
2-Avg E.S. of five 10 shot groups
3-Min spread of single group



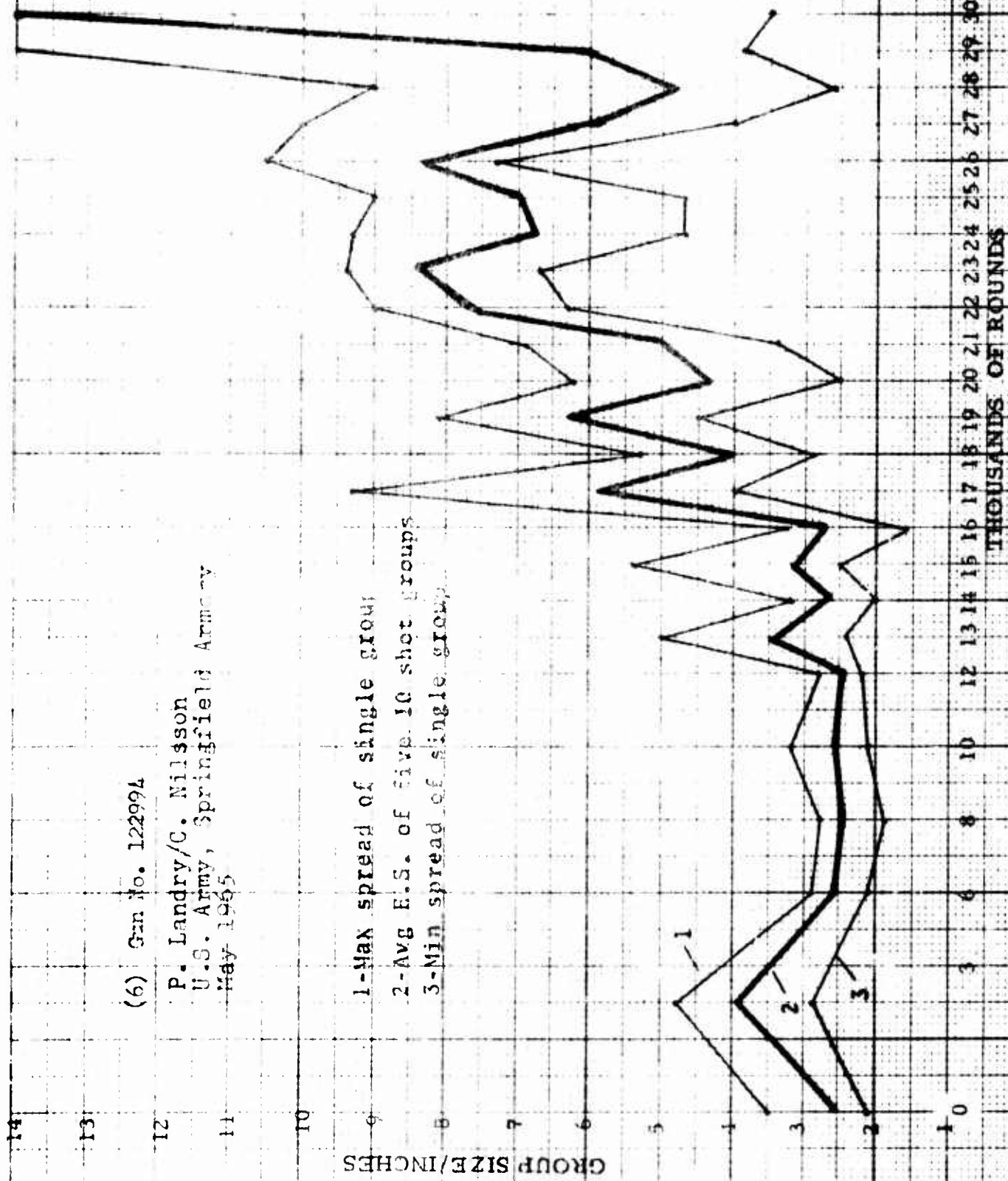
APPENDIX D

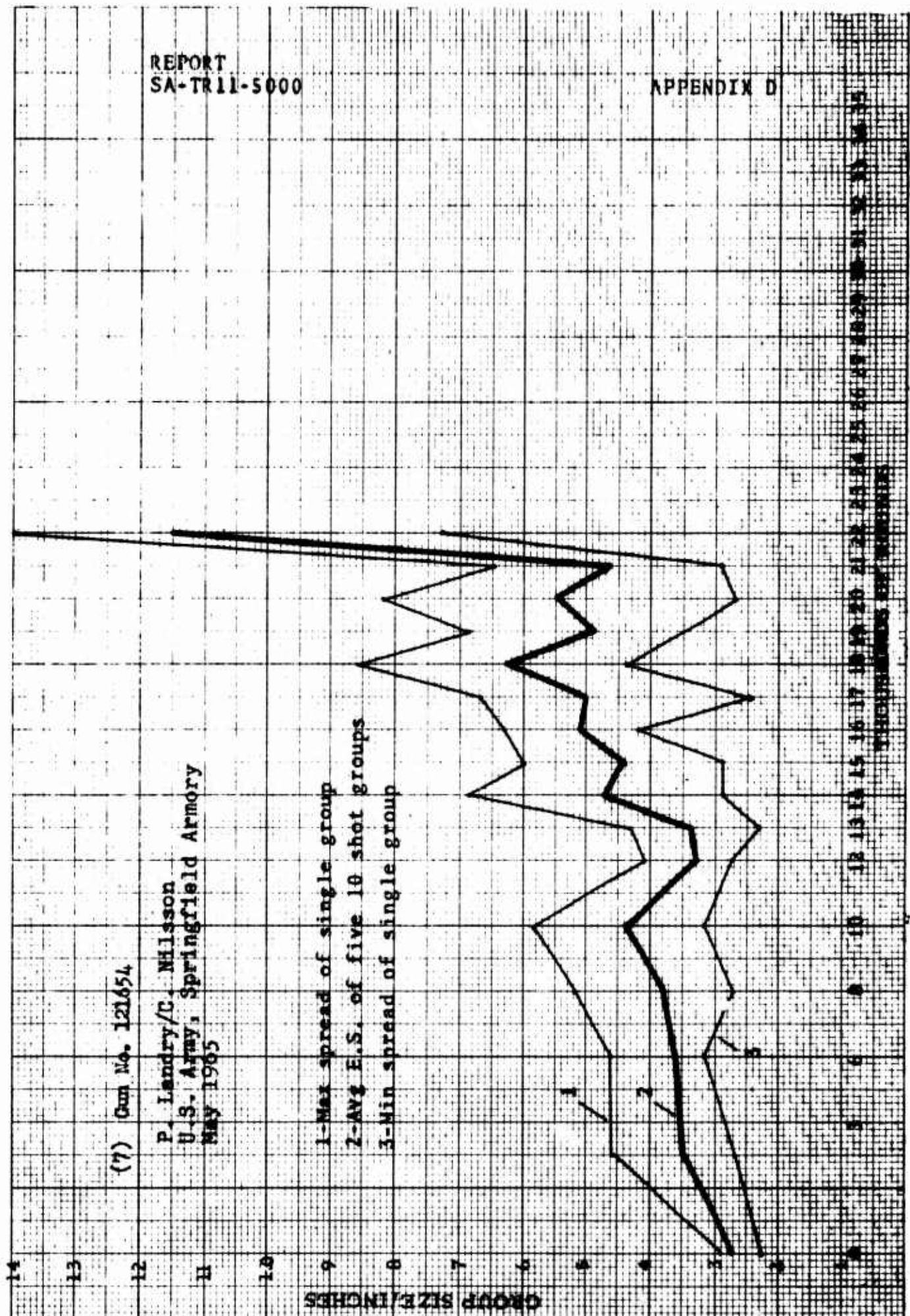
REPORT
SA-TR11-5000

(6) Grn No. 122994

P. Landry/C. Nilsson
U.S. Army, Springfield Army
May 1965

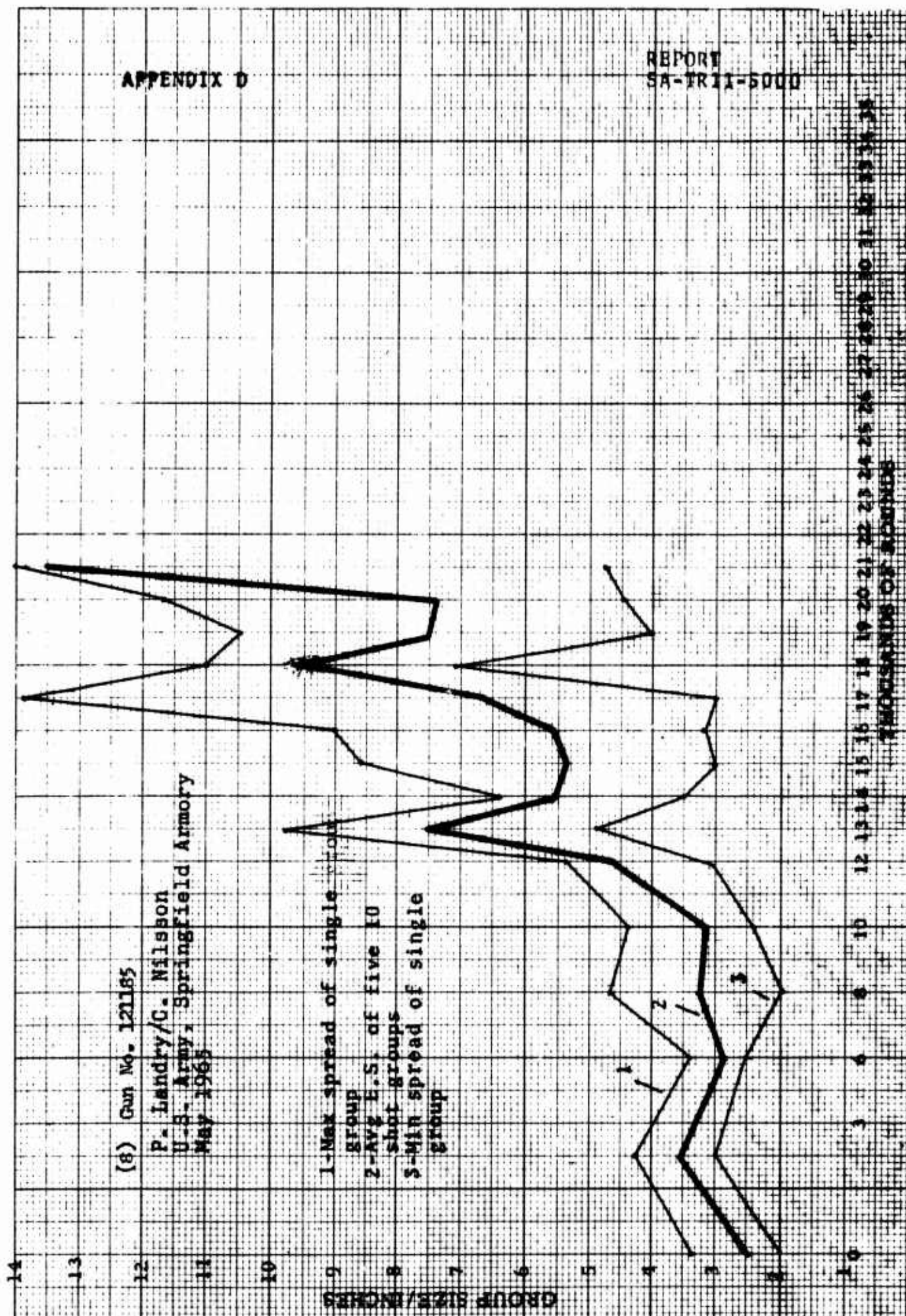
- 1-Max spread of single group
- 2-Avg E.S. of five 10 shot groups
- 3-Min spread of single group





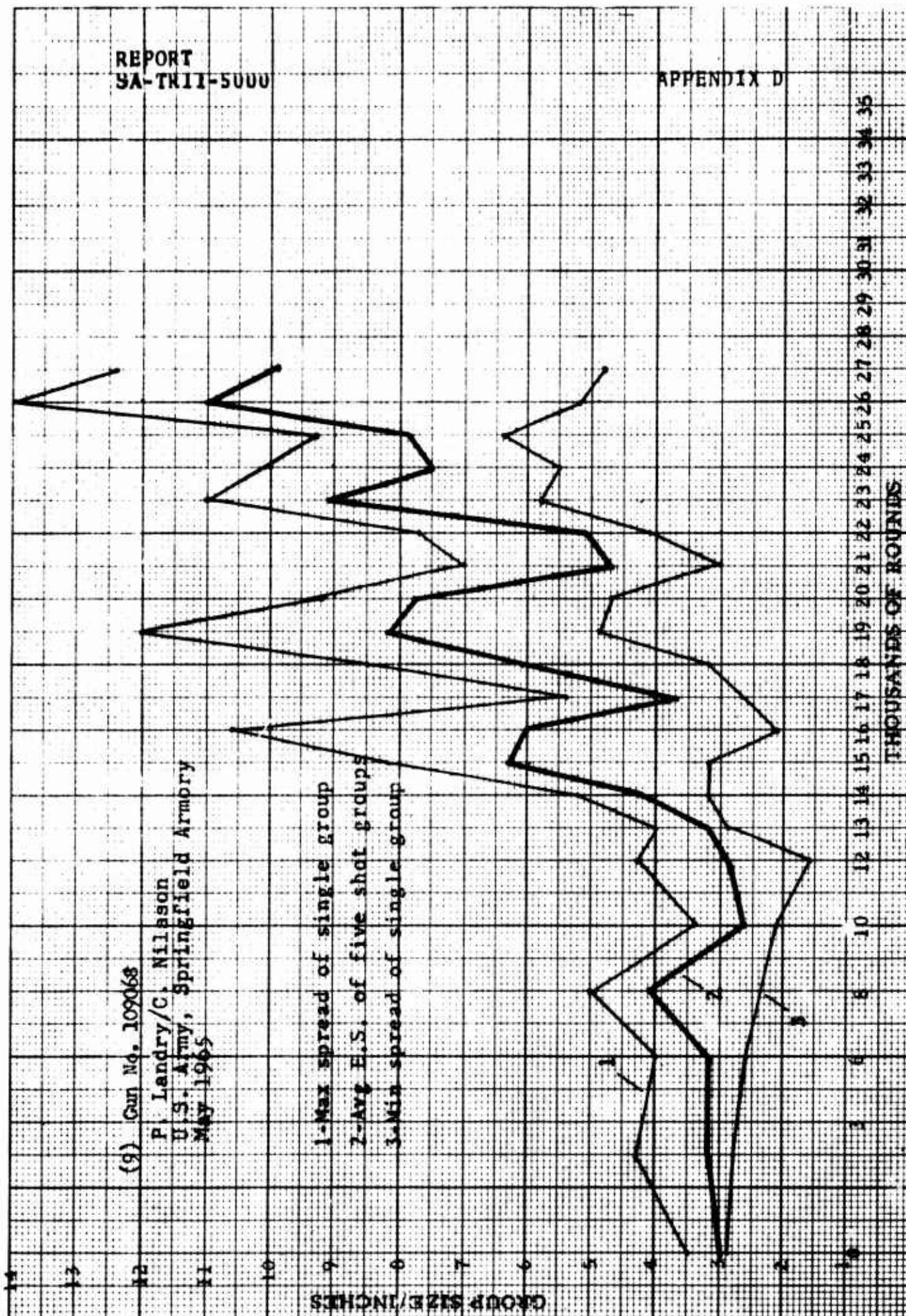
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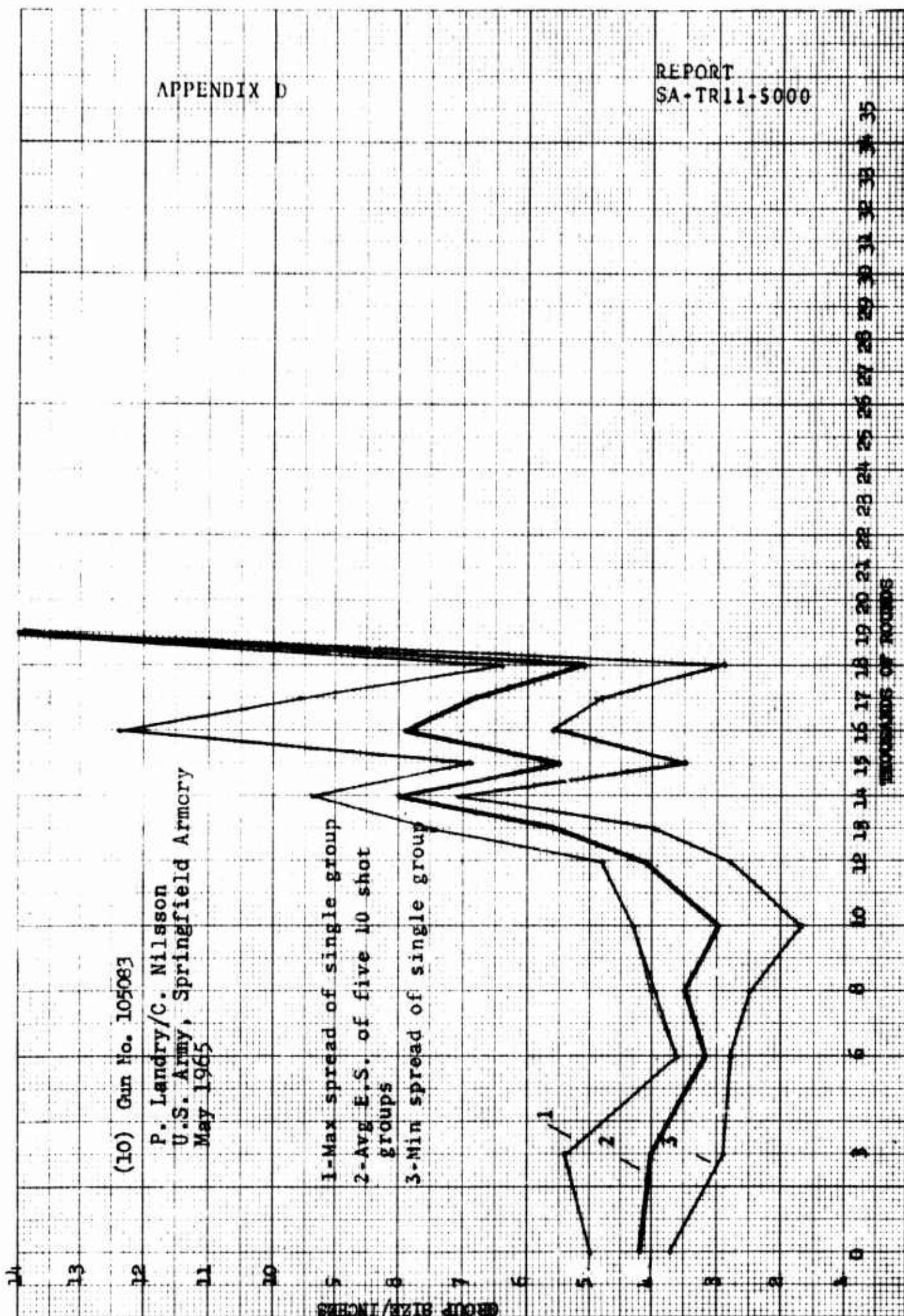
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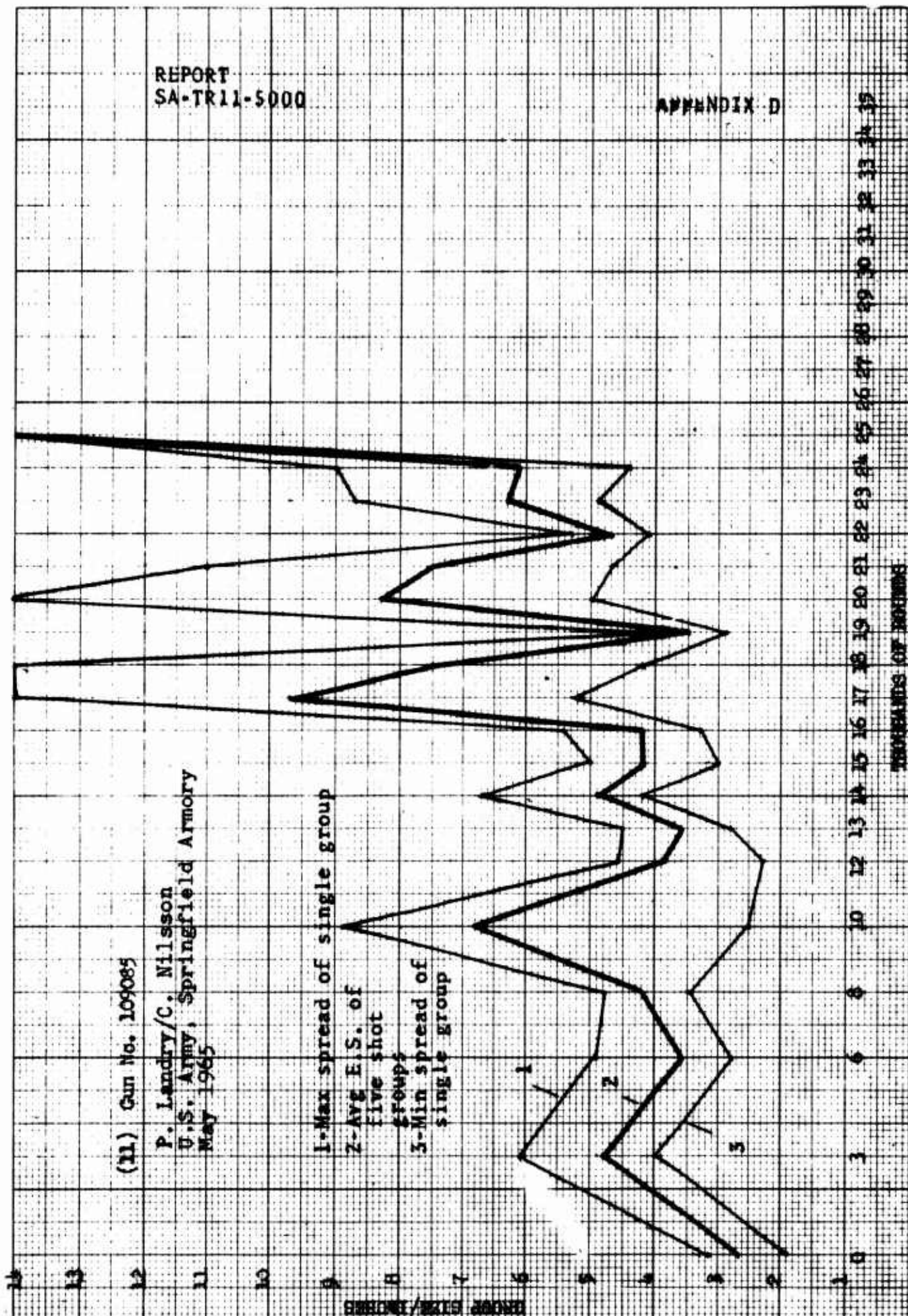
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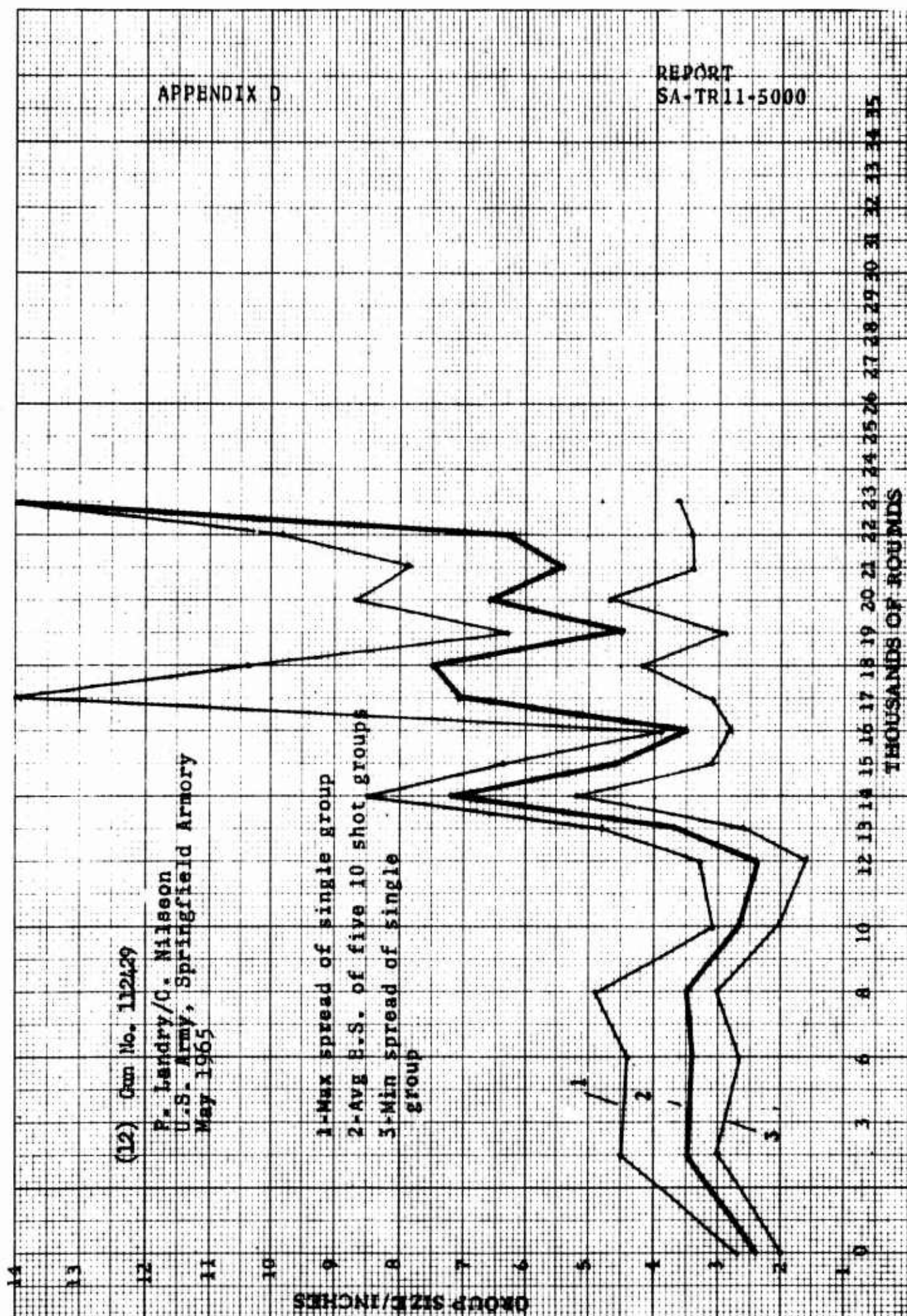
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APPENDIX D

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APPENDIX E

VELOCITY DATA

APPENDIX E

REPORT
SA-TR11-5000VELOCITY AT 53 FT.

(Average of ten shots measured in feet per second)

GUN NUMBER

ROUNDS FIRED	1	2	3	4	5	6	7	8	9	10	11	12
0	3108	3096	3088	3065	3053	3064	3055	3068	3132	3089	3082	3087
3,000	3088	3064	3057	3061	3070	3078	3121	3098	3093	3092	3100	3082
6,000	3076	3073	3013	3014	3032	3024	3028	3003	3005	3019	3005	3012
8,000	3057	3065	3000	3025	3050	3084	3048	3013	3029	3029	3038	3030
10,000	3016	3021	2995	3019	3029	3029	3067	3019	3015	3041	3108	3057
12,000	2996	2970	2976	2966	2986	2970	3045	3012	2999	3011	3046	3023
13,000	3083	3040	3054	3038	3000	3013	2992	2943	2990	3005	3004	2990
14,000	3063	3053	2999	3026	3030	3037	2970	2930	3030	3062	2977	2953
15,000	3024	3003	3018	2984	3071	3081	3092	3070	3032	3029	3132	3089
16,000	3073	3082	3048	3065	2931	2974	3084	3061	2966	2955	3077	3075
17,000	3013	3012	2977	2970	2955	2961	3001	2994	2993	2948	3040	2998
18,000	2920	2927	2881	2892	2961	2999	3023	3017	3013	2931	3043	3054
19,000	3005	2969	2974	2972	3054	3039	3026	3053	3018	2993	3042	3055
20,000	3019	3051	3043	3032	3082	3058	3011	3023	3071	-	3028	3027
21,000	3034	3004	2975	3007	2961	2971	3053	3062	2953		3071	3099
22,000	3009	2032	2992	3039	2958	2967	3034	-	2946		3020	3047
23,000	2991	2983	2968	3002	3057	3069	-		3082		3000	3019
24,000	2973	2976	2993	2956	3060	3049			3038		3078	-
25,000	2984	2986	3019	2970	2975	2990			3005		3060	
26,000	3026	3032	3032	3069	2997	3024			2979		-	
27,000	3056	3070	3024	3060	3040	3063			3034			
28,000	-	2990	2.68	2972	3013	3023			-			

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APPENDIX E

GUN NUMBER

ROUNDS FIRED	1	2	3	4	5	6	7	8	9	10	11	12
29,000		2969	2938	2954	3058	3066						
30,000	-	3077	3047	-	3046	3070	-	-	-	-	-	-
31,000		3087	3046		2972	-						
32,000		2992	2992		3091							
33,000		3032	3020		3066							
34,000		3038	3024		2955							
35,000		3053	3019		3052							

NOTE: FIRST SCREEN SET AT 28 FEET FROM MUZZLE

SECOND SCREEN SET AT 78 FEET FROM MUZZLE

X M16E1 BARREL EROSION TEST

APPENDIX E

Rifle #1 (108860)

VELOCITY READINGS

- Thousands of Rounds -

ROUND NUMBER	0	3	6	8	10	12	13	14	15	16	17
1	3078	3079	3027	3027	2990	3023	3067	3107	3015	3120	3020
2	3082	3085	3071	3044	3037	2946	3088	3045	3027	3073	3018
3	3130	3073	3054	3060	3045	2961	3100	3069	3032	3079	2996
4	3107	3092	3065	3021	2991	3017	3056	3066	2995	3116	3022
5	3059	3067	3102	3084	3040	3012	3002	3020	3033	3082	3036
6	3120	3081	3076	3041	3023	2967	3107	2998	3014	3045	3047
7	3145	3140	3082	3105	3041	3033	3110	3096	3027	3047	2998
8	3157	3090	3107	3059	3045	3002	3094	3096	2990	3033	3055
9	3118	3064	3079	3022	2994	2989	3119	3089	3042	3068	2928
10	3119	3109	3101	3105	2955	3011	3082	3043	3067	3062	3014
AVG	3108	3088	3076	3057	3016	2996	3083	3063	3024	3073	3013

VELOCITY READINGS MEASURED IN FEET PER SECOND

REPORT
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XM16E1 BARREL EROSION TEST

Rifle #1 (108860)

VELOCITY READINGS

ROUND NUMBER	- Thousands of Rounds -									
	18M	19M	20M	21M	22M	23M	24M	25M	26M	27M
1	2919	3038	3052	3051	3046	2965	2943	2957	3021	3038
2	2899	2975	3055	3045	3031	3002	2947	3021	3044	3071
3	2950	2931	3054	3013	3054	3052	2923	2993	3037	3048
4	2919	2998	2981	3059	2944	3051	3003	3014	2998	3067
5	2895	2992	2984	3067	2995	2975	2967	2953	3054	3051
6	2989	3033	2988	3029	2984	2942	2936	3002	2976	3076
7	2892	3034	3004	3042	2997	2981	2949	2964	3029	3054
8	2878	3012	3022	3011	3038	3001	2959	2984	3049	3089
9	2955	3018	3019	2975	2979	2941	3104	2970	3027	3047
10	2904	3023	3030	3043	3026	2997	2995	2967	3024	3015
AVG	2920	3005	3019	3034	3009	2991	2973	2984	3026	3056

XM16E1 BARREL EROSION TEST

Rifle #2 (123225)

VELOCITY READINGS

ROUND NUMBER	- Thousands of Rounds -										
	0	3	6	8	10	12	13	14	15	16	17
1	3103	3042	3075	3063	3037	2945	3014	3007	2994	3056	2967
2	3036	3056	3036	3041	2983	2983	3059	3076	2998	3081	2986
3	3062	3055	3050	3127	3048	2938	3049	3027	3008	3098	2962
4	3134	3032	3115	3073	2997	2988	3031	3054	2969	3143	2992
5	3125	3045	3070	3045	3047	2974	3114	3063	3024	3116	3061
6	3062	3095	3076	3027	3043	2991	3042	3051	2995	3083	3067
7	3099	3086	3064	3091	2978	2939	3037	3108	3057	3111	3022
8	3100	3072	3051	3074	2997	2997	3082	3052	3004	3031	3015
9	3119	3055	3097	3072	3033	2947	3026	3066	2989	3047	3018
10	3118	3104	3099	3036	3047	296	2944	3030	2996	3053	3028
AVG	3096	3064	3073	3065	3021	2970	3040	3053	3003	3082	3012

VELOCITY READINGS MEASURED IN FEET PER SECOND

XM16E1 BARREL EROSION TEST

Rifle #2 (123225)

VELOCITY READINGS

- Thousands of Rounds -

ROUND NUMBER	18M	19M	20M	21M	22M	23M	24M	25M	26M	27M
1	2947	2955	3083	3093	3050	2946	2982	2977	3038	3088
2	2920	2965	3066	3019	3087	2952	2932	2981	3042	3079
3	2917	2981	3034	2988	3008	2974	2964	2956	3037	3083
4	2949	2957	3036	2968	2954	2993	2948	3001	3068	3109
5	3003	2943	3064	2985	3043	2953	3063	3003	2964	3110
6	2930	2982	3014	2964	3030	2996	2921	3026	3023	3066
7	2853	2970	3072	3001	3041	3026	2917	2955	3049	3031
8	2920	2957	3031	3029	3056	2979	3034	3030	3058	3041
9	2881	2978	3016	2946	3034	2959	3015	2950	3034	3021
10	2947	3002	3092	3042	3017	3050	2984	2985	3004	3073
AVG	2927	2969	3051	3004	3032	2983	2976	2986	3032	3070

X 1621 BARREL EROSION TEST

Rifle #2 (123225)

VELOCITY READINGS

ROUND NUMBER	- Thousands of Rounds -							
	28M	29M	30M	31M	32M	33M	34M	35M
1	2984	3018	3024	3129	2993	3042	3041	3034
2	3074	3003	3075	3111	2938	3025	3011	3049
3	2896	2870	3065	3107	3013	3014	3069	3065
4	3031	2976	3108	3070	3033	3024	3021	3036
5	2965	2998	3026	3067	2957	3043	2956	3050
6	3037	2970	3120	3048	3018	3036	3051	3035
7	3012	2945	3095	3069	3040	3053	3055	3047
8	2904	2972	3090	3127	2971	3017	3042	3077
9	3050	2947	3065	3087	2971	3061	3062	3078
10	2952	2991	3100	3054	2987	3001	3070	3055
AVG	2990	2969	3077	3087	2992	3032	3038	3053

X M16E1 BARREL EROSION TEST

Rifle # 3 (118603)

VELOCITY READINGS

ROUND NUMBER	- Thousands of Rounds -																
	0	3	6	8	10	12	13	14	15	16	17						
1	3081	3056	2970	3029	3010	2971	3064	2983	3019	3096	2970						
2	3058	3045	3035	2968	2963	3032	3066	3008	3076	3017	2970						
3	3094	3076	3043	3039	3011	2914	3016	2991	2989	3037	2955						
4	3105	3073	2981	2971	2974	3014	3049	2969	2994	3009	2959						
5	3092	3047	3040	3040	3008	2984	3094	2967	2929	3023	2971						
6	3105	3076	3051	3026	3020	2983	3084	3034	3021	3021	2988						
7	3085	3044	2945	3039	2965	2959	3080	2984	3071	3085	2997						
8	3079	3068	2994	2991	3013	2918	3062	2994	3084	3061	3018						
9	3098	3036	3041	2944	3003	2987	3005	2993	3014	3074	2937						
10	3053	3031	3031	2950	2987	2994	3020	3067	2987	3059	3007						
AVG	3088	3057	3013	3000	2995	2976	3054	2999	3018	3048	2977						

APPENDIX E

VELOCITY READINGS MEASURED IN FEET PER SECOND

X M16E1 BARREL EROSION TEST

Rifle # 3 (118603)

VELOCITY READINGS

ROUND NUMBER	18M	19M	20M	- Thousands of Rounds -				24M	25M	26M	27M
				21M	22M	23M	24M				
1	2887	2960	3063	2993	2979	2974	2960	3044	3037	2996	2996
2	2886	2917	3042	2952	2988	2995	3059	3032	3032	2986	2986
3	2885	2930	3051	2936	2992	3078	2963	2974	3016	2972	2972
4	2872	2966	3102	2944	3004	2921	3047	2996	3020	3010	3010
5	2882	2948	2973	2972	3018	2960	2952	2981	3033	3020	3020
6	2877	2964	3047	2981	3001	2948	2971	3034	3074	3020	3020
7	2883	3067	3076	2966	2923	2961	2970	3047	2986	3041	3041
8	2950	3009	3051	2977	2973	2963	3007	2995	3032	3064	3064
9	2857	2986	3013	3002	3031	2950	2960	3047	3058	3041	3041
10	2832	2994	3018	3023	3011	2968	3041	3040	3036	3053	3053
AVG	2881	2974	3043	2975	2992	2968	2993	3019	3032	3024	3024

X M16E1 BARREL EROSION TEST

Rifle # 3 (118603)

VELOCITY READINGS

ROUND NUMBER	- Thousands of Rounds -									
	28M	29M	30M	31M	32M	33M	34M	35M		
1	3016	2961	3038	3070	2995	3017	2991	3080		
2	2966	2938	2999	2970	2949	3015	3022	3020		
3	2950	2898	3058	3073	3033	3028	3079	3047		
4	2991	2897	3037	3015	2983	3021	3055	3051		
5	2982	2885	3000	3009	2996	3024	2995	3018		
6	2916	2978	3065	3064	2968	3035	2998	2988		
7	2973	2983	3088	3071	3022	2993	3012	3053		
8	2923	2900	3051	3059	2989	3024	3024	3000		
9	3009	2958	3052	3087	2981	3010	3050	2987		
10	2949	2985	3088	3041	3003	3030	3016	2947		
AVG	2968	2938	3047	3046	2992	3020	3024	3019		

APPENDIX E

APPENDIX E

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XM1681 BARREL EROSION TEST

Rifle # 4 (122033)

VELOCITY READINGS

- Thousands of Rounds -

ROUND

	0	3	6	8	10	12	13	14	15	16	17
1	3205	3062	2953	3041	3031	2959	3060	3036	2992	3105	2957
2	3014	3038	3006	3028	3045	2974	3002	3018	3014	3034	2985
3	3003	3065	3021	3038	2995	2947	3050	2993	2953	3057	2990
4	3069	3058	2994	3004	2975	2959	3040	3031	2967	3070	2982
5	3079	3089	3023	3018	3040	3007	3047	3041	2970	3008	3047
6	3064	3053	3012	3054	3047	2926	3036	3046	29814	3092	2992
7	3024	3080	3020	3019	2995	3031	3014	3020	2963	3077	2949
8	3067	3029	3064	3032	3047	2915	3026	3046	3003	3082	2959
9	3062	3082	3009	2974	3035	2904	3002	3053	2067	3078	2970
10	3062	3053	3036	3039	2980	3038	3107	2974	3022	3042	2971
AVG	3065	3061	3014	3025	3019	2966	3038	3026	2984	3065	2970

VELOCITY READINGS MEASURED IN FEET PER SECOND

REPORT
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APPENDIX E

Rifle # 4 (122033)

XM16E1 BARREL EROSION TEST

VELOCITY READINGS

- Thousands of Rounds -

ROUND

NUMBER	1M	19M	2M	21M	22M	23M	24M	25M	26M
1	2868	3003	3039	3020	2979	2975	2959	2950	3091
2	2895	2963	3017	3049	3025	2992	3010	3008	3090
3	2958	2945	3077	3044	3018	2964	2988	2995	3071
4	2909	2957	3045	3045	3070	2980	2948	2963	3068
5	2845	2904	3094	2955	3042	3041	2932	2990	3036
6	2883	2952	3025	3021	3082	3043	2958	2984	3062
7	2832	2959	2996	2983	2974	2983	2955	2944	3117
8	2858	3018	3002	2976	3044	2955	2950	2940	3039
9	2916	3020	2947	3021	3074	3049	2944	2929	3039
10	2953	2996	3075	2953	3086	3038	2918	3009	3051
AVG	2892	2972	3032	3007	3039	3002	2956	2970	3069

APPENDIX E

REPORT
SA-TR11-5000

X M161 BARREL EROSION TEST

Rifle # 4 (122033)

VELOCITY READINGS

- Thousands of Rounds -

ROUND

NUMBER	27M	28M	29M
1	3073	3001	2901
2	3061	2989	2947
3	3069	2958	2929
4	3049	2925	2955
5	3044	2981	2992
6	3054	2991	2973
7	3118	2967	2873
8	3019	2970	2979
9	3088	2936	3009
10	3027	3000	2983
TEMP	3060	2972	2954

XM16E1 BARREL EROSION TEST

Rifle # 5 (113821)

VELOCITY READINGS

ROUND NUMBER	- Thousands of Rounds -																
	0	3	6	8	10	12	13	14	15	16	17						
1	3050	2959	3000	3005	3011	2981	3034	3016	3072	2880	2960						
2	3091	3121	3045	3063	3022	2977	3014	3072	3072	2965	2968						
3	3057	3071	3057	3068	2978	3026	3015	3064	3088	2922	2909						
4	3047	2987	3013	2982	3057	3003	2984	3002	3047	2976	2943						
5	3051	3098	3021	3087	3044	2955	2943	3060	3062	2926	2975						
6	3058	3129	3038	3081	3089	3029	3016	2956	3050	2963	2915						
7	3097	3120	3037	3110	3014	2951	3008	3024	3115	2934	2941						
8	3080	3090	3109	3067	2991	2985	2986	3049	3090	2935	2977						
9	3058	3068	3043	3018	3048	2956	3004	2996	3021	2922	2967						
10	2945	3055	2983	3019	3035	3001	2997	3064	3091	2881	2995						
AVG	3053	3070	3032	3050	3029	2986	3000	3030	3071	2931	2955						

VELOCITY READINGS MEASURED IN FEET PER SECOND

XM16E1 BARREL EROSION TEST

Rifle # 5 (113821)

VELOCITY READINGS

ROUND -NUMBER-	- Thousands of Rounds -										
	18M	19M	20M	21M	22M	23M	24M	25M	26M	27M	28M
1	2940	3021	3087	3050	2978	3036	3054	2942	3030	3028	3050
2	2988	3025	3125	2964	2911	3057	3045	2983	2977	3061	3020
3	2939	3072	3080	3008	2892	3088	3071	2955	2942	2980	2990
4	2900	3047	3085	2945	2956	3033	3014	2966	2961	3051	2973
5	3021	3088	3074	2949	2992	3024	3066	3008	3017	3033	3079
6	2999	3076	3080	2915	2987	3092	3084	2997	3054	3091	3035
7	2978	3091	2963	2985	2950	3092	3039	2947	3000	2931	2976
8	2942	2996	3096	2953	2999	3092	3045	2947	2997	3059	3024
9	2968	3101	3116	2939	2985	3023	3099	2984	2971	3075	2968
10	2941	3018	3110	2902	2917	3028	3086	3017		3053	3017
AVG	2961	3054	3082	2961	2958	3057	3060	2975	2997	3040	3013

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X M16E1 BARREL EROSION TEST

Rifle # 5 (113821)

VELOCITY READINGS

ROUND NUMBER	- Thousands of Rounds -				
	29M	30M	31M	32M	33M
1	3029	3056	2983	3046	3030
2	3076	3041	2938	3106	3047
3	3019	3047	2932	3126	3107
4	3067	3044	2897	3096	3086
5	3081	3058	2934	3097	3067
6	3089	3103	3028	3075	3066
7	3030	2996	3011	3055	3047
8	3051	3005	3014	3103	3062
9	3085	3067	3000	3102	3061
10	3053	3046	2980	3103	
AVG	3058	3046	2972	3091	3066
					34M
					35M
					3044
					3106
					3085
					3056
					3072
					3014
					3068
					3035
					3019
					3018
					3052

XM16E1 BARREL EROSION TEST

Rifle # 6 (122994)

VELOCITY READINGS

ROUND NUMBER	- Thousands of Rounds -															
	0	3	6	8	10	12	13	14	15	16	17					
1	3051	3044	3000	3110	3037	2963	2974	3041	3010	2969	2939					
2	3017	3099	3057	3070	3014	2995	3002	3065	3054	2945	2900					
3	3096	3062	2969	3065	3011	2941	2983	3092	3051	2997	2968					
4	3068	3068	3004	3068	3016	2928	2975	3042	3063	3056	2941					
5	3013	3102	3036	3096	3001	3009	3012	3040	3108	2932	2942					
6	3058	3090	3040	3096	3022	2944	3016	3023	3103	2936	2978					
7	3090	3057	3014	3097	3014	2980	3003	3002	3102	2943	2998					
8	3064	3096	3062	3112	3047	2984	3062	3001	3083	2969	3020					
9	3075	3080	3051	3046	3049	3009	3065	3000	3136	3007	2989					
10	3116	3080	3006	3089	3074	2949	3041	3062	3099	2984	2939					
AVG	3064	3078	3024	3084	3029	2970	3013	3037	3081	2974	2961					

VELOCITY READINGS MEASURED IN FEET PER SECOND

XM16E1 BARREL EROSION TEST

Rifle # 6

VELOCITY READINGS

- Thousands of Rounds -

ROUND NUMBER	18M	19M	20M	21M	22M	23M	24M	25M	26M	27M	28M
1	2952	3022	3038	2986	2997	3070	3024	2930	2981	3086	3000
2	3002	3019	3044	2949	2981	3062	3010	2955	3055	3043	3033
3	3001	2995	3024	3015	2964	3056	3071	2945	2987	3091	3042
4	3025	3094	3103	2995	2913	3070	3066	2988	2948	3043	2966
5	3022	3083	3054	2930	2979	3071	3055	3000	3045	3096	3045
6	3006	3037	3062	3002	2990	3117	3063	2978	3076	3086	3000
7	3055	3048	3104	2994	2930	3048	3023	3061	3066	3034	2979
8	3018	3057	3104	2971	3015	3083	3075	2985	2964	3040	3050
9	2957	2998	2995	2928	2943	3021	3047	3037	3075	3063	3046
10	2956	3041	3052	2937	2957	3092	3054	3021	3039	3048	3072
AVG	2999	3039	3058	2971	2967	3069	3049	2990	3024	3063	3023

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M16E1 BARREL EROSION TEST

VELOCITY READINGS

Rifle # 6 (122994) - Thousands of Rounds -

ROUND NUMBER	29M	30M
1	3035	3073
2	3071	3084
3	3044	3071
4	3083	3080
5	3005	3066
6	3110	3013
7	3123	3074
8	3073	3067
9	3058	3095
10	3053	3072
AVG	3066	3070

XM16E1 BARREL EROSION TEST

Rifle # 7 (121654)

VELOCITY READINGS

ROUND

- Thousands of Rounds -

NO.	0	3	6	8	10	12	13	14	15	16	17
1	3027	3170	2957	3056	3057	3069	2997	3014	3080	2979	2980
2	3043	3109	3038	3099	3061	3024	2995	2943	3068	3002	2912
3	3061	3144	3051	3074	3017	3023	2972	2965	3116	3043	2955
4	3020	3149	3064	3015	3088	3065	2973	2944	3067	3040	3002
5	3085	3095	3017	3038	3048	3056	2940	2953	3076	3026	3005
6	3042	3078	3005	3010	3070	3028	2976	3010	3095	3055	3039
7	3104	3130	3006	3024	3048	3063	3081	2975	3126	3008	3000
8	3059	3101	3041	3060	3098	3042	3004	2904	3067	3062	3015
9	3022	3126	3015	3022	3083	3047	2932	3026	3096	3044	3065
10	3105	3103	3086	3085	3102	3030	3052	2970	3124	3084	3033
AVG	3057	3121	3028	3048	3067	3045	2992	2970	3092	3034	3001

VELOCITY READINGS MEASURED IN FEET PER SECOND

Rifle # 7 (121654)

VELOCITY READINGS

**ROUND
NUMBER**

- Thousands of Rounds -
1934 20M

21M 22M

224

1	2963	2990	3020	3045	3025
2	3003	3060	2950	3049	3003
3	3025	3033	2977	3102	3036
4	3008	3008	2996	3060	3028
5	3013	3015	2966	3039	3039
6	3059	3047	3030	3067	3016
7	3065	2979	3038	3058	3049
8	3007	3049	3060	3066	3060
9	2999	3073	3059	2995	3033
10	3087	3008	3015	3053	3052
AVG	3023	3026	3011	3053	3034

XM16E1 BARREL EROSION TEST

Rifle # 8 (121185)

VELOCITY READINGS

ROUND NUMBER	- Thousands of Rounds -										
	0	3	6	8	10	12	13	14	15	16	17
1	2980	3085	2970	3018	2972	2994	2943	2957	3106	3109	3007
2	3093	3064	3041	2953	2995	3066	2978	2898	3035	3081	3007
3	3051	3054	3002	3005	2977	2988	2937	2872	3080	3057	2997
4	3076	3062	2960	3017	3000	2983	2945	2886	3050	3042	2900
5	3081	3127	3006	3052	3015	2980	2883	2980	3083	3026	3041
6	3116	3103	3019	3060	3096	2992	2936	2980	3085	3012	3041
7	3079	3129	2980	2992	3030	3038	2928	2980	3097	3078	3041
8	3069	3143	3023	3013	3034	3047	2981	2925	3028	3027	2988
9	3068	3117	2980	3018	3043	3029	2964	2915	3046	3058	2961
10	3070	3091	3046	3006	3025	2998	2931	2982	3093	3116	2968
A7G	3068	3098	3003	3013	3019	3012	2943	2930	3070	3061	2994

VELOCITY READINGS MEASURED IN FEET PER SECOND

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XM168E1 BARREL EROSION TEST

Rifle #8 (121185)

VELOCITY READINGS

ROUND NUMBER	- Thousands of Rounds -			
	18M	19M	20M	21M
1	2977	3052	3000	2986
2	3019	3058	3033	3076
3	3016	3036	3042	3058
4	3030	3067	2966	3038
5	3008	3059	3045	3069
6	3075	3018	3000	3102
7	3038	3044	2979	3077
8	2961	3112	3050	3112
9	3008	3011	3046	3041
10	3035	3069	3072	3061
AVG	3017	3053	3023	3062

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XM16E1 BARREL EROSION TEST

Rifle # 9 (109068)

VELOCITY READINGS

ROUND NUMBER	- Thousands of Rounds -																
	0	3	6	8	10	12	13	14	15	16	17						
1	3125	3079	3009	3025	3040	3006	2985	3057	3000	3033	2966						
2	3099	3111	2962	3073	3057	3055	2960	3045	2996	2995	2988						
3	3129	3074	2983	3058	3028	2956	2985	3023	3006	2997	3022						
4	3161	3113	2998	3042	2994	3018	3016	3005	3007	2967	2975						
5	3157	3064	2992	3061	3015	2957	2949	2999	3040	2956	3037						
6	3109	3118	2995	3027	2996	3021	2984	3032	3054	2941	2934						
7	3144	3114	2994	2944	3003	3026	3049	3033	3070	2956	2998						
8	3157	3098	2997	3013	2984	3001	2999	3035	3034	2956	2993						
9	3143	3066	3065	3013	3018	2953	2955	3035	3032	2994	3021						
10	3097	3089	3050	3030	3012	3001	3020	3036	3074	2968	2997						
AVG	3132	3093	3005	3029	3015	2999	2990	3030	3032	2966	2993						

VELOCITY READINGS MEASURED IN FEET PER SECOND

X M16E1 BARREL EROSION TEST

Rifle # 9 (109068)

VELOCITY READINGS

ROUND NUMBER	- Thousands of Rounds -									
	18M	19M	20M	21M	22M	23M	24M	25M	26M	27M
1	3060	3013	3082	2907	2913	3120	3015	3007	3024	3054
2	3046	3038	3110	2996	2968	3110	3018	2956	3001	3034
3	3004	3035	3074	2925	2909	3117	3096	3030	3003	2936
4	3061	3016	3086	2965	2928	3073	3007	2990	2997	3005
5	2974	2987	3041	2980	2996	3041	3032	2960	2949	3050
6	3002	3039	3000	2916	2966	3068	3042	3005	3044	3071
7	2983	3021	3040	2952	2928	3063	3042	2969	3008	3004
8	3016	2995	3105	2932	3000	3067	3007	2962	3064	3029
9	3012	3017	3073	3031	3007	3040	3085	2930	2970	3056
10	2975	3020	3094	2929	2943	3120	3035	2983	2985	3101
AVG	3013	3018	3071	2953	2946	3082	3038	2979	3005	3034

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XM16E1 BARREL EROSION TEST

Rifle # 10 (105083)

VELOCITY READINGS

- Thousands of Rounds -

ROUND

NUMBER	0	3	6	8	10	12	13	14	15	16	17
1	3091	3089	3107	3003	3061	3058	2954	3024	3007	2943	2925
2	3113	3095	3018	3016	3066	2983	2970	3111	3069	2888	2906
3	3065	3090	3020	3077	3042	3011	3027	3106	3058	2956	2963
4	3077	3099	3012	3035	3002	2957	3007	2988	2980	2948	2945
5	3134	3082	3005	3095	2989	2987	2971	3023	2991	3045	2947
6	3115	3057	2990	3022	3001	3007	2998	3045	3013	2930	2944
7	3063	3142	2988	3013	3058	2999	2965	3078	3064	2930	2908
8	3071	3090	3023	3033	3039	3020	3031	3095	2999	2903	2953
9	3067	3100	3004	2997	3079	3047	3063	3108	3041	3012	3113
10	3090	3082	3020	3000	3077	3049	3062	3042	3064	2998	2875
AVG	3089	3092	3019	3029	3041	3011	3005	3062	3029	2955	2948

VELOCITY READINGS MEASURED IN FEET PER SECOND

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XM1011 BARREL EROSION TEST

Rifle # 10 (105083)	VELOCITY READINGS	
	- Thousands of Rounds -	
ROUND NUMBER	18M	19M
1	2924	3034
2	2879	2990
3	2934	2993
4	2936	2985
5	2881	2983
6	2964	3024
7	2963	3072
8	2926	2928
9	2976	2964
10	2922	2981
AVG	2931	2995

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XM16E1 BARREL EROSION TEST

Rifle # 11 (109085)

VELOCITY READINGS

- Thousands of Rounds -

ROUND NUMBER	0	3	6	8	10	12	13	14	15	16	17
1	3079	3080	3008	3060	3095	3002	3031	2943	3131	3042	3095
2	3078	3137	2957	3002	3106	2999	2946	3005	3147	3104	3067
3	3102	3108	3036	3107	3078	3041	2997	2883	3123	3118	3060
4	3081	3111	2921	3003	3133	3078	2974	2964	3126	3123	3098
5	3081	3107	3026	3049	3126	3095	2907	2964	3162	3067	3034
6	3100	3125	2992	3026	3095	3065	2940	3013	3150	3065	3041
7	3074	3094	3004	3040	3083	3036	2959	3034	3090	3066	3023
8	3065	3103	3048	3014	3143	3074	3028	3013	3139	3098	3003
9	3115	3066	3021	3047	3109	3036	2948	2956	3124	3031	3042
10	3043	3072	3039	3036	3110	3037	3307	2991	3129	3056	2938
AVG	3082	3100	3005	3038	3108	3040	3004	2977	3132	3077	3040

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VELOCITY READINGS MEASURED IN FEET PER SECOND

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XM16E1 BARREL EROSION TEST

Rifle # 11 (109085)

VELOCITY READINGS

- Thousands of Rounds -

18M	19M	20M	21M	22M	23M	24M	25M
3081	3095	3000	3114	3010	2934	3048	3028
3039	3043	3066	3065	3006	2976	3087	3088
3032	3041	3004	3082	3040	2999	3086	3067
3036	3048	3053	3031	3029	3035	3104	3065
3011	3040	2996	3054	2979	3083	3065	3082
2987	3106	3016	3705	3050	2979	3081	3046
2997	2996	3017	3054	2990	2980	3066	3066
3075	3012	3018	3115	3037	3020	3083	3047
3097	2984	3055	3034	3035	2972	3096	3067
<u>3075</u>	<u>3052</u>	<u>3054</u>	<u>3091</u>	<u>3028</u>	<u>3021</u>	<u>3067</u>	<u>3047</u>
AVG 3043	3042	3028	3071	3020	3000	3078	3060

XM1681 BARREL EROSION TEST

Rifle # 12 (122429)

VELOCITY READINGS

Round Number	Thousands of Rounds -																
	0	3	6	8	10	12	13	14	15	16	17						
1	3079	3112	2960	2987	3047	3051	3028	2910	3163	3034	3008						
2	3068	3037	2987	3000	3056	3015	2991	2910	3068	3058	2979						
3	3063	3037	3049	3014	3031	3026	2996	2964	3030	3065	3030						
4	3061	3055	2991	3045	3082	3029	2977	2936	3053	3093	2969						
5	3085	3086	3067	3108	3033	2994	3014	3013	3100	3088	2911						
6	3076	3088	2947	3055	3094	2995	2957	2986	3042	3064	3018						
7	3153	3049	3002	3039	3049	3030	2985	2918	3097	3041	3017						
8	3074	3094	3013	3021	3096	3024	2949	2932	3130	3103	2977						
9	3120	3119	3058	3015	3066	3024	3028	2943	3131	3080	3043						
10	3076	3091	3041	3024	3016	3037	2974	3016	3138	3126	3024						
AVG	3087	3082	3012	3030	3057	3023	2990	2953	3089	3075	2998						

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VELOCITY READINGS MEASURED IN FEET PER SECOND

Rifle # 12 (122429)

VELOCITY READINGS

ROUND NUMBER	Thousands of Rounds -					
	18M	19M	20M	21M	22M	23M
1	3020	3038	3027	3114	3055	2987
2	3058	3105	3045	3111	3013	3015
3	3071	3053	3047	3121	2977	3057
4	3052	2944	2968	3084	3087	3013
5	3097	3081	3001	3097	3052	2992
6	3045	3037	3013	3083	3093	3015
7	3087	3084	3047	3092	3029	3057
8	3052	3104	3027	3091	3065	3007
9	3057	3056	3050	3115	3072	2999
10	2997	3052	3044	3086	3030	3051
AVG	3054	3055	3027	3099	3047	3019

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APPENDIX F

EROSION DATA

APPENDIX F

REPORT
SA-TR11-5000BORE MEASUREMENTS USING EROSION GAGE

	Rifle Number											
	1	2	3	4	5	6	7	8	9	10	11	12
2	.2218	.2225	.2212	.2213	.2210	.2219	.2210	.2213	.2220	.2228	.2205	.2214
3	.2218	.2225	.2222	.2225	.2217	.2220	.2219	.2213	.2220	.2227	.2207	.2220
4	.2218	.2227	.2222	.2223	.2210	.2220	.2219	.2210	.2222	.2228	.2207	.2224
5	.2218	.2225	.2222	.2225	.2210	.2220	.2219	.2210	.2222	.2229	.2207	.2220
6	.2215	.2225	.2222	.2225	.2210	.2215	.2219	.2210	.2222	.2228	.2207	.2220
7	.2215	.2225	.2222	.2220	.2210	.2218	.2219	.2220	.2222	.2228	.2207	.2223
8	.2215	.2222	.2222	.2222	.2218	.2225	.2219	.2233	.2222	.2230	.2207	.2220
9	.2215	.2220	.2222	.2222	.2218	.2219	.2215	.2208	.2222	.2225	.2207	.2220
10	.2215	.2220	.2222	.2222	.2223	.2220	.2220	.2220	.2220	.2229	.2207	.2220
11	.2215	.2228	.2226	.2225	.2225	.2220	.2218	.2220	.2220	.2229	.2207	.2220
12	.2215	.2229	.2230	.2228	.2225	.2229	.2218	.2220	.2225	.2229	.2207	.2223
13	.2219	.2238	.2239	.2229	.2235	.2235	.2220	.2225	.2240	.2234	.2210	.2226
14	.2224	.2240	.2240	.2232	.2248	.2243	.2222	.2230	.2245	.2243	.2220	.2235
15	.2228	.2249	.2249	.2245	.2253	.2245	.2238	.2242	.2253	.2254	.2240	.2250
16	.2238	.2252	.2250	.2250	.2255	.2253	.2250	.2250	.2258	.2255	.2250	.2250
17	.2248	.2254	.2256	.2655	.2259	.2258	.2259	.2260	.2260	.2260	.2255	.2258
18	.2253	.2260	.2260	.2259	.2260	.2258	.2262	.2266	.2269	.2265	.2260	.2260
19	.2269	.2269	.2270	.2260	.2270	.2265	.2272	.2270	.2270	.2265	.2265	.2269

Inches from muzzle end.

BULLET SEAT ADVANCE

Rounds	Rifle Number											
	1	2	3	4	5	6	7	8	9	10	11	12
0	.000	-.020	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
1,000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
2,000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
3,000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
4,000	.000	.000	+.020	.000	+.020	.000	.000	.000	.000	.000	.000	.000
5,000	.000	.000	+.020	.000	+.020	.000	.000	.000	.000	.000	.000	.000
6,000	.000	.000	+.020	.000	+.020	.000	.000	.000	.000	.000	.000	.000
7,000	.000	.000	+.020	.000	+.020	.000	.000	+.020	.000	.000	.000	.000
8,000	.000	.000	+.020	.000	+.020	.000	+.020	+.020	.000	.000	.000	.000
9,000	+.020	.000	+.040	+.020	+.020	+.020	+.020	+.020	+.020	.000	.000	.000
10,000	+.020	.000	+.040	+.020	+.020	+.020	+.020	+.020	+.020	.000	+.020	+.020
11,000	+.020	.000	+.040	+.020	+.020	+.020	+.020	+.020	+.020	.000	+.020	+.020
12,000	+.020	+.020	+.040	+.020	+.020	+.020	+.020	+.020	+.020	+.020	+.020	+.020
13,000	+.020	+.020	+.040	+.020	+.020	+.020	+.020	+.020	+.020	+.020	+.020	+.020
14,000	+.040	+.020	+.040	+.040	+.020	+.020	+.020	+.020	+.020	+.020	+.020	+.020
15,000	+.040	+.020	+.040	+.040	+.020	+.020	+.020	+.040	+.020	+.020	+.020	+.020
16,000	+.040	+.020	+.040	+.040	+.020	+.020	+.020	+.040	+.020	+.020	+.020	+.020
17,000	+.040	+.020	+.040	+.040	+.040	+.020	+.040	+.040	+.020	+.020	+.020	+.020
18,000	+.040	+.020	+.040	+.040	+.040	+.020	+.040	+.040	+.020	+.020	+.040	+.020

APPENDIX F

REPORT
SA-TR11-5000BULLET SEAT ADVANCE (Cont'd)

Rounds	Rifle Number											
	1	2	3	4	5	6	7	8	9	10	11	12
19,000	+.040	+.020	+.040	+.040	+.040	+.040	+.040	+.040	+.020	+.040	+.040	+.040
20,000	+.040	+.020	+.040	+.040	+.040	+.040	+.040	+.040	+.040	-----	+.040	+.040
21,000	+.040	+.020	+.040	+.040	+.040	+.040	+.040	+.060	+.040	-----	+.040	+.040
22,000	+.040	+.020	+.040	+.040	+.060	+.040	+.100	-----	+.040	-----	+.060	+.060
23,000	+.040	+.020	+.040	+.040	+.060	+.040	-----	-----	+.040	-----	+.080	+.080
24,000	+.060	+.040	+.060	+.040	+.060	+.040	-----	-----	+.040	-----	+.080	-----
25,000	+.060	+.040	+.060	+.060	+.060	+.040	-----	-----	+.060	-----	+.080	-----
26,000	+.080	+.040	+.080	+.080	+.060	+.040	-----	-----	+.060	-----	-----	-----
27,000	+.080	+.060	+.080	+.080	+.080	+.060	-----	-----	+.080	-----	-----	-----
28,000	-----	+.060	+.080	+.080	+.080	+.060	-----	-----	-----	-----	-----	-----
29,000	-----	+.060	+.080	+.080	+.100	+.080	-----	-----	-----	-----	-----	-----
30,000	-----	+.060	+.080	-----	+.100	+.080	-----	-----	-----	-----	-----	-----
31,000	-----	+.060	+.100	-----	+.120	-----	-----	-----	-----	-----	-----	-----
32,000	-----	+.080	+.100	-----	+.140	-----	-----	-----	-----	-----	-----	-----
33,000	-----	+.080	+.140	-----	+.140	-----	-----	-----	-----	-----	-----	-----
34,000	-----	+.160	+.140	-----	+.160	-----	-----	-----	-----	-----	-----	-----
35,000	-----	+.160	+.160	-----	+.200	-----	-----	-----	-----	-----	-----	-----

XM16E1 BARREL EROSION TEST

Rifle #1 (108860) BORE MEASUREMENTS - AIR GAGE

INCHES FROM SUPPRESSOR MUZZLE	- Thousands of Rounds -											
	0	6	8	10	12	14	16	18	20	22	24	26
2	.2196	.2201	.2196	.2202	.2196	.2196	.2197	.2197	.2196	.2198	.2195	.2196
3	.2196	.2202	.2197	.2201	.2197	.2197	.2197	.2200	.2197	.2197	.2197	.2196
4	.2196	.2202	.2196	.2201	.2197	.2197	.2196	.2197	.2195	.2194	.2193	.2194
5	.2195	.2201	.2196	.2201	.2196	.2196	.2196	.2193	.2193	.2197	.2195	.2196
6	.2194	.2202	.2196	.2201	.2196	.2197	.2196	.2196	.2193	.2196	.2197	.2196
7	.2195	.2202	.2196	.2200	.2196	.2200	.2197	.2195	.2193	.2196	.2196	.2196
8	.2193	.2201	.2196	.2200	.2196	.2193	.2195	.2193	.2196	.2196	.2196	.2195
9	.2194	.2200	.2197	.2203	.2196	.2194	.2195	.2193	.2196	.2196	.2194	.2195
10	.2193	.2201	.2196	.2200	.2195	.2194	.2194	.2196	.2197	.2193	.2194	.2193
11	.2191	.2201	.2196	.2201	.2196	.2194	.2195	.2195	.2194	.2195	.2194	.2194
12	.2194	.2200	.2197	.2202	.2196	.2198	.2195	.2195	.2194	.2195	.2194	.2195
13	.2195	.2201	.2196	.2201	.2197	.2199	.2194	.2195	.2193	.2191	.2195	.2193
14	.2203	.2202	.2196	.2202	.2204	.2205	.2200	.2201	.2191	.2203	.2201	.2203
15	.2195	.2201	.2200	.2201	.2196	.2196	.2197	.2201	.2194	.2197	.2198	.2206
16	.2194	.2206	.2195	.2200	.2195	.2195	.2195	.2195	.2194	.2195	.2198	
17	.2195	.2200	.2195	.2200	.2198	.2195	.2194	.2201	.2194			
18	.2194	.2199	.2195	.2200	.2194	.2195	.2195	.2198	.2197			
19	.2194	.2199	.2199	.2202	.2197							

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XM16E1 BARREL EROSION TEST

Rifle #1 (108860)

BORE MEASUREMENTS - AIR GAGE

INCHES FROM
SUPPRESSOR

- Thousands of Rounds -

MUZZLE	27
2	.2196
3	.2198
4	.2197
5	.2197
6	.2191
7	.2194
8	.2193
9	.2191
10	.2195
11	.2194
12	.2197
13	.2202

XM16E1 BARREL EROSION TEST

Rifle #2 (123225)

BORE MEASUREMENTS - AIR GAGE

INCHES FROM SUPPRESSOR MUZZLE	- Thousands of Rounds -											
	0	6	8	10	12	14	16	18	20	22	24	26
2	.2201	.2201	.2202	.2202	.2202	.2200	.2200	.2199	.2202	.2203	.2200	.2201
3	.2201	.2201	.2202	.2202	.2197	.2201	.2200	.2201	.2202	.2202	.2200	.2202
4	.2200	.2201	.2202	.2202	.2202	.2201	.2198	.2199	.2204	.2203	.2202	.2201
5	.2200	.2199	.2203	.2203	.2203	.2203	.2201	.2203	.2200	.2203	.2200	.2202
6	.2200	.2203	.2203	.2203	.2203	.2203	.2201	.2203	.2202	.2203	.2201	.2201
7	.2200	.2201	.2201	.2201	.2201	.2199	.2196	.2193	.2201	.2202	.2200	.2200
8	.2199	.2202	.2202	.2201	.2201	.2199	.2198	.2195	.2201	.2200	.2198	.2197
9	.2199	.2201	.2202	.2198	.2199	.2200	.2200	.2200	.2198	.2198	.2198	.2199
10	.2200	.2201	.2201	.2200	.2200	.2201	.2201	.2201	.2199	.2199	.2199	.2199
11	.2195	.2202	.2201	.2202	.2202	.2202	.2201	.2200	.2199	.2199	.2199	.2199
12	.2197	.2202	.2201	.2202	.2201	.2201	.2200	.2199	.2199	.2199	.2200	.2200
13	.2199	.2202	.2201	.2201	.2201	.2201	.2200	.2200	.2198	.2199	.2199	.2198
14	.2200	.2201	.2201	.2201	.2202	.2202	.2200	.2199	.2196	.2200	.2201	.2201
15	.2200	.2201	.2200	.2202	.2201	.2202	.2201	.2197	.2197	.2202	.2202	.2202
16	.2200	.2201	.2200	.2201	.2201	.2202	.2201	.2200	.2197	.2202	.2206	.2205
17	.2200	.2201	.2200	.2201	.2201	.2201	.2201	.2198	.2199			
18	.2200	.2200	.2200	.2200	.2200	.2201	.2201	.2204	.2204			
19	.2200	.2199	.2200	.2200	.2206							

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XM16E1 BARREL EROSION TEST

Rifle #2 (123225)

BORE MEASUREMENTS - AIR GAGE

INCHES FROM
SUPPRESSOR
MUZZLE

- Thousands of Rounds -

	28	30	32	35
2	.2202	.2204	.2201	.2203
3	.2202	.2205	.2201	.2203
4	.2202	.2205	.2202	.2204
5	.2202	.2201	.2202	.2204
6	.2202	.2201	.2201	.2204
7	.2202	.2201	.2201	.2204
8	.2201	.2204	.2200	.2203
9	.2199	.2203	.2200	.2204
10	.2200	.2201	.2201	.2208
11	.2199	.2202	.2202	
12	.2203	.2205	.2205	
13	.2204	.2209	.2209	
14	.2207			

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XM16E1 BARREL EROSION TEST

Rifle #3 (118613)

BORE MEASUREMENTS - AIR GAGE

INCHES FROM SUPPRESSOR MUZZLE	- Thousands of Rounds -											
	0	6	8	10	12	14	16	18	20	22	24	26
2	.2199	.2200	.2200	.2200	.2200	.2198	.2198	.2200	.2201	.2200	.2199	.2200
3	.2199	.2201	.2200	.2200	.2200	.2198	.2199	.2200	.2202	.2200	.2199	.2199
4	.2199	.2199	.2200	.2199	.2198	.2199	.2199	.2200	.2198	.2201	.2196	.2198
5	.2198	.2200	.2200	.2200	.2199	.2198	.2199	.2200	.2200	.2201	.2195	.2195
6	.2197	.2205	.2200	.2200	.2200	.2199	.2200	.2200	.2200	.2196	.2192	.2196
7	.2197	.2204	.2199	.2199	.2200	.2194	.2199	.2200	.2199	.2200	.2199	.2197
8	.2197	.2205	.2200	.2200	.2195	.2195	.2195	.2200	.2200	.2200	.2199	.2197
9	.2196	.2202	.2200	.2197	.2197	.2197	.2196	.2197	.2198	.2197	.2197	.2198
10	.2197	.2205	.2200	.2200	.2198	.2199	.2197	.2198	.2200	.2198	.2199	.2199
11	.2194	.2205	.2200	.2199	.2199	.2200	.2197	.2198	.2198	.2200	.2198	.2199
12	.2195	.2205	.2200	.2200	.2199	.2199	.2197	.2199	.2196	.2198	.2197	.2200
13	.2196	.2205	.2200	.2200	.2199	.2198	.2198	.2199	.2197	.2198	.2198	.2200
14	.2197	.2205	.2200	.2200	.2200	.2199	.2199	.2200	.2196	.2198	.2201	.2203
15	.2198	.2204	.2200	.2200	.2200	.2199	.2199	.2200	.2197	.2199	.2203	.2207
16	.2198	.2204	.2199	.2198	.2199	.2199	.2199	.2199	.2197	.2199	.2209	
17	.2198	.2204	.2199	.2198	.2199	.2199	.2198	.2198	.2201	.2201		
18	.2198	.2204	.2199	.2196	.2198	.2198	.2197	.2200				
19	.2198	.2201	.2198	.2201	.2207							

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XM16E1 BARREL EROSION TEST

Rifle #3 (118603)

BORE MEASUREMENTS - AIR GAGE

INCHES FROM
SUPPRESSOR

- Thousands of Rounds -

MUZZLE	28	30	32	35
2	.2200	.2201	.2199	.2202
3	.2200	.2202	.2199	.2202
4	.2200	.2201	.2198	.2201
5	.2199	.2201	.2196	.2201
6	.2199	.2201	.2199	.2203
7	.2199	.2201	.2199	.2203
8	.2200	.2202	.2200	.2202
9	.2197	.2202	.2200	.2202
10	.2199	.2203	.2201	.2205
11	.2200	.2203	.2201	.2205
12	.2201	.2206	.2208	
13	.2204			
14	.2209			

XM16E1 BARREL EROSION TEST

Rifle #4 (122033) BORE MEASUREMENTS - AIR GAGE

INCHES FROM SUPPRESSOR		- Thousands of Rounds -											
MUZZLE	0	6	8	10	12	14	16	18	20	22	24	26	
2	.2201	.2201	.2202	.2202	.2199	.2202	.2196	.2201	.2203	.2202	.2200	.2202	
3	.2201	.2201	.2202	.2202	.2200	.2202	.2197	.2201	.2203	.2203	.2198	.2201	
4	.2201	.2189	.2202	.2201	.2199	.2203	.2199	.2201	.2202	.2202	.2200	.2202	
5	.2201	.2195	.2202	.2202	.2201	.2203	.2199	.2201	.2202	.2203	.2200	.2199	
6	.2201	.2201	.2202	.2202	.2201	.2203	.2202	.2202	.2202	.2203	.2199	.2199	
7	.2200	.2199	.2200	.2200	.2198	.2201	.2200	.2200	.2201	.2200	.2196	.2200	
8	.2200	.2201	.2201	.2200	.2198	.2201	.2197	.2194	.2201	.2199	.2197	.2199	
9	.2200	.2200	.2201	.2199	.2198	.2199	.2200	.2196	.2197	.2198	.2198	.2201	
10	.2200	.2201	.2201	.2200	.2199	.2202	.2200	.2198	.2198	.2199	.2199	.2200	
11	.2200	.2201	.2201	.2200	.2200	.2201	.2200	.2199	.2199	.2199	.2200	.2200	
12	.2200	.2201	.2201	.2199	.2201	.2201	.2200	.2199	.2199	.2198	.2200	.2198	
13	.2200	.2201	.2200	.2200	.2201	.2201	.2200	.2199	.2199	.2198	.2200	.2199	
14	.2200	.2201	.2200	.2200	.2200	.2201	.2200	.2199	.2196	.2199	.2202	.2203	
15	.2200	.2201	.2200	.2200	.2200	.2200	.2200	.2199	.2198	.2199	.2206	.2207	
16	.2200	.2200	.2200	.2200	.2200	.2201	.2199	.2200	.2198	.2203			
17	.2200	.2200	.2199	.2199	.2199	.2200	.2199	.2198	.2204				
18	.2200	.2201	.2199	.2199	.2200	.2202	.2204	.2201					
19	.2200	.2198	.2197	.2200	.2199								

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XM16E1 BARREL EROSION TEST

Rifle #4 (122033)

BORE MEASUREMENTS - AIR GAGE

INCHES FROM
SUPPRESSOR

- Thousands of Rounds -

MUZZLE	28
2	.2204
3	.2202
4	.2202
5	.2202
6	.2202
7	.2201
8	.2199
9	.2201
10	.2202
11	.2204
12	.2205
13	.2209

XM16E1 BARREL EROSION TEST

Rifle #5 (113821) BORE MEASUREMENTS - AIR GAGE

INCHES FROM SUPPRESSOR MUZZLE	- Thousands of Rounds -											
	0	3	6	10	14	16	18	20	22	24	26	28
2	.2199	.2200	.2200	.2200	.2200	.2200	.2192	.2191	.2200	.2198	.2199	.2203
3	.2198	.2198	.2200	.2200	.2200	.2200	.2200	.2192	.2199	.2201	.2200	.2202
4	.2197	.2199	.2196	.2200	.2199	.2197	.2197	.2193	.2199	.2190	.2199	.2200
5	.2197	.2195	.2198	.2200	.2195	.2196	.2196	.2195	.2196	.2194	.2199	.2196
6	.2197	.2199	.2198	.2200	.2199	.2200	.2196	.2195	.2200	.2199	.2199	.2197
7	.2197	.2194	.2197	.2200	.2199	.2200	.2192	.2196	.2200	.2200	.2199	.2196
8	.2197	.2194	.2199	.2199	.2199	.2200	.2193	.2200	.2203	.2200	.2199	.2195
9	.2197	.2197	.2194	.2197	.2195	.2200	.2197	.2196	.2197	.2196	.2197	.2197
10	.2197	.2197	.2196	.2200	.2199	.2197	.2197	.2198	.2197	.2198	.2199	.2198
11	.2197	.2197	.2199	.2200	.2199	.2199	.2197	.2198	.2198	.2198	.2197	.2201
12	.2196	.2199	.2199	.2200	.2198	.2197	.2198	.2198	.2199	.2197	.2198	.2204
13	.2197	.2199	.2199	.2200	.2197	.2198	.2197	.2198	.2199	.2198	.2199	.2207
14	.2197	.2199	.2199	.2200	.2198	.2198	.2197	.2198	.2198	.2198	.2201	
15	.2198	.2199	.2198	.2200	.2198	.2199	.2198	.2199	.2199	.2198	.2205	
16	.2199	.2199	.2198	.2200	.2198	.2199	.2198	.2199	.2200	.2205		
17	.2199	.2198	.2197	.2199	.2197	.2198	.2196	.2202				
18	.2198	.2197	.2197	.2199	.2198	.2199	.2204	.2209				
19	.2198	.2197	.2198	.2200								

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XM16E1 BARREL EROSION TEST

Rifle #5 (113821)

BORE MEASUREMENTS - AIR GAGE

INCHES FROM SUPPRESSOR MUZZLE	- Thousands of Rounds -			
	30	32	34	35
2	.2202	.2200	.2202	.2203
3	.2203	.2201	.2203	.2199
4	.2202	.2201	.2204	.2200
5	.2202	.2202	.2203	.2201
6	.2201	.2202	.2205	.2203
7	.2201	.2203	.2207	.2204
8	.2202	.2203	.2205	.2204
9	.2199	.2203	.2206	.2203
10	.2202	.2204	.2206	.2207
11	.2204	.2204		
12	.2206	.2208		

XM16E1 BARREL EROSION TEST

Rifle #6 (122994) BORE MEASUREMENTS - AIR GAGE

INCHES FROM SUPPRESSOR MUZZLE	- Thousands of Rounds -											
	0	3	6	10	14	16	18	20	22	24	26	28
2	.2199	.2199	.2200	.2200	.2200	.2199	.2198	.2200	.2200	.2200	.2201	.2200
3	.2198	.2199	.2199	.2199	.2199	.2199	.2193	.2200	.2200	.2200	.2201	.2200
4	.2198	.2199	.2197	.2200	.2199	.2198	.2192	.2200	.2197	.2200	.2200	.2200
5	.2198	.2199	.2199	.2200	.2199	.2197	.2193	.2201	.2197	.2198	.2200	.2200
6	.2198	.2199	.2200	.2200	.2200	.2200	.2198	.2200	.2196	.2200	.2200	.2198
7	.2198	.2199	.2196	.2200	.2199	.2198	.2196	.2200	.2199	.2200	.2200	.2197
8	.2198	.2199	.2199	.2200	.2199	.2200	.2201	.2200	.2195	.2200	.2200	.2194
9	.2198	.2199	.2199	.2200	.2198	.2197	.2197	.2199	.2199	.2198	.2200	.2195
10	.2199	.2198	.2199	.2199	.2198	.2196	.2198	.2199	.2200	.2200	.2201	.2199
11	.2196	.2198	.2197	.2199	.2198	.2196	.2197	.2197	.2199	.2200	.2201	.2202
12	.2196	.2198	.2196	.2199	.2197	.2195	.2197	.2195	.2200	.2198	.2202	.2206
13	.2196	.2198	.2200	.2199	.2197	.2194	.2197	.2196	.2202	.2202	.2205	
14	.2197	.2198	.2194	.2200	.2197	.2194	.2197	.2195	.2205	.2207		
15	.2197	.2199	.2194	.2199	.2198	.2194	.2198	.2200	.2208			
16	.2199	.2199	.2195	.2199	.2198	.2195	.2197	.2205				
17	.2198	.2198	.2197	.2198	.2197	.2198	.2202					
18	.2198	.2199	.2197	.2199	.2200	.2206	.2206					
19	.2199	.2199	.2198	.2205								

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X M16E1 BARREL EROSION TEST

Rifle #6 (12294)

BORE MEASUREMENTS - AIR GAGE

INCHES FROM
SUPPRESSOR

MUZZLE

30

2	.2200
3	.2200
4	.2202
5	.2201
6	.2201
7	.2200
8	.2202
9	.2202
10	.2205
11	.2207

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XM16E1 BARREL EROSION TEST

Rifle #7 (12154)

BORE MEASUREMENTS - AIR GAGE

INCHES FROM SUPPRESSOR MUZZLE	- Thousands of Rounds -							
	0	6	10	14	16	18	20	22
2	.2198	.2200	.2200	.2199	.2200	.2200	.2202	.2200
3	.2198	.2199	.2200	.2199	.2199	.2200	.2201	.2201
4	.2198	.2200	.2200	.2199	.2200	.2200	.2200	.2200
5	.2197	.2200	.2200	.2190	.2199	.2200	.2200	.2198
6	.2198	.2200	.2199	.2194	.2200	.2200	.2199	.2202
7	.2197	.2199	.2200	.2199	.2199	.2199	.2199	.2202
8	.2198	.2200	.2199	.2199	.2200	.2199	.2200	.2202
9	.2198	.2199	.2198	.2198	.2197	.2199	.2197	.2201
10	.2198	.2199	.2198	.2195	.2197	.2199	.2199	.2201
11	.2196	.2199	.2199	.2195	.2195	.2198	.2199	.2201
12	.2196	.2199	.2196	.2195	.2195	.2198	.2198	.2201
13	.2196	.2199	.2198	.2195	.2198	.2198	.2199	.2202
14	.2195	.2195	.2198	.2194	.2190	.2196	.2199	
15	.2197	.2197		.2198	.2195	.2199		
16	.2197	.2198		.2198	.2198	.2203		
17	.2198	.2198		.2198	.2204			
18	.2198	.2199						
19	.2198	.2206						

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XM16E1 BARREL EROSION TEST

Rifle #8 (121185) BORE MEASUREMENTS - AIR GAGE

INCHES FROM SUPPRESSOR MUZZLE	0	6	10	14	16	18	20	21
2	.2200	.2202	.2202	.2202	.2199	.2203	.2204	.2202
3	.2198	.2202	.2199	.2201	.2198	.2203	.2203	.2198
4	.2199	.2202	.2196	.2199	.2198	.2202	.2201	.2201
5	.2199	.2202	.2201	.2200	.2197	.2201	.2199	.2197
6	.2199	.2201	.2201	.2201	.2199	.2201	.2203	.2202
7	.2199	.2201	.2200	.2199	.2201	.2202	.2202	.2201
8	.2198	.2201	.2199	.2200	.2200	.2201	.2201	.2200
9	.2199	.2201	.2198	.2195	.2196	.2201	.2201	.2196
10	.2198	.2201	.2198	.2195	.2194	.2202	.2200	.2197
11	.2198	.2199	.2197	.2196	.2195	.2201	.2203	.2198
12	.2197	.2200	.2196	.2196	.2196	.2201	.2203	.2202
13	.2197	.2200	.2196	.2196	.2195	.2200	.2203	.2205
14	.2198	.2200	.2198	.2199	.2199	.2200	.2208	.2209
15	.2199	.2200	.2199	.2200	.2199	.2201		
16	.2199	.2200	.2200	.2198	.2200	.2204		
17	.2199	.2200	.2199	.2204				
18	.2199	.2200	.2200					
19	.2199	.2205						

XM16E1 BARREL EROSION TEST

Rifle #9 (109068) BORE MEASUREMENTS - AIR GAGE

INCHES FROM SUPPRESSOR MUZZLE	- Thousands of Rounds -										
	0	3	6	10	14	16	18	20	22	24	26
2	.2197	.2199	.2198	.2199	.2199	.2199	.2199	.2200	.2199	.2199	.2200
3	.2197	.2199	.2199	.2200	.2200	.2199	.2200	.2199	.2198	.2200	.2200
4	.2197	.2199	.2196	.2200	.2200	.2195	.2198	.2193	.2197	.2200	.2199
5	.2197	.2199	.2196	.2200	.2200	.2198	.2198	.2199	.2196	.2200	.2199
6	.2195	.2199	.2197	.2200	.2198	.2198	.2197	.2195	.2194	.2199	.2199
7	.2197	.2199	.2192	.2200	.2200	.2199	.2199	.2191	.2196	.2200	.2200
8	.2197	.2197	.2196	.2198	.2198	.2197	.2199	.2197	.2194	.2199	.2200
9	.2197	.2198	.2195	.2199	.2197	.2194	.2195	.2197	.2197	.2197	.2199
10	.2195	.2196	.2195	.2199	.2195	.2195	.2195	.2196	.2197	.2197	.2199
11	.2195	.2195	.2195	.2198	.2192	.2194	.2195	.2195	.2197	.2199	.2200
12	.2195	.2195	.2192	.2195	.2192	.2194	.2195	.2195	.2198	.2201	.2205
13	.2195	.2196	.2192	.2192	.2193	.2191	.2193	.2200	.2203		
14	.2195	.2196	.2193	.2192	.2195	.2192	.2192	.2193	.2205		
15	.2195	.2196	.2195	.2194	.2197	.2195	.2205				
16	.2196	.2197	.2196	.2195	.2197	.2206					
17	.2197	.2197	.2197	.2196							
18	.2196	.2197	.2197	.2199							
19	.2197	.2198	.2199								

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APPENDIX F

XM16E1 BARREL EROSION TEST

Rifle #11 (109085) BORE MEASUREMENTS - AIR GAGE

INCHES FROM SUPPRESSOR MUZZLE	- Thousands of Rounds -									
	0	6	10	14	16	18	20	22	24	25
2	.2198	.2198	.2199	.2199	.2197	.2199	.2199	.2203	.2200	.2202
3	.2196	.2199	.2199	.2198	.2197	.2199	.2197	.2200	.2199	.2200
4	.2197	.2198	.2200	.2196	.2197	.2199	.2197	.2201	.2198	.2199
5	.2192	.2197	.2197	.2197	.2191	.2199	.2198	.2199	.2198	.2199
6	.2193	.2198	.2198	.2197	.2196	.2197	.2199	.2201	.2200	.2197
7	.2192	.2197	.2195	.2196	.2196	.2196	.2198	.2198	.2197	.2196
8	.2198	.2200	.2198	.2198	.2196	.2197	.2195	.2201	.2200	.2197
9	.2193	.2197	.2196	.2191	.2190	.2194	.2195	.2193	.2198	.2192
10	.2194	.2197	.	.2191	.2191	.2194	.2191	.2195	.2196	.2194
11	.2193	.2196		.2193	.2191	.2194	.2192	.2195	.2197	.2197
12	.2193	.2196		.2192	.2190	.2192	.2192	.2195	.2197	.2199
13	.2193	.2197		.2193	.2190	.2192	.2193	.2197	.2003	
14	.2193	.2195		.2194	.2190	.2195	.2195	.2199		
15	.2194	.2196		.2195	.2195	.2196	.2197			
16	.2194	.2195		.2196	.2194	.2200				
17	.2194	.2196		.2196	.2201					
18	.2195	.2197								
19	.2195	.2203								

APPENDIX F

REPORT
SA-TR 11-5000

XM16E1 BARREL EROSION TEST

Rifle #12 (112429) BORE MEASUREMENTS - AIR GAGE

INCHES FROM
SUPPRESSOR
MUZZLE

- Thousands of Rounds -

INCHES FROM SUPPRESSOR MUZZLE									
2	.2200	.2202	.2202	.2201	.2199	.2201	.2201	.2199	.2205
3	.2200	.2201	.2203	.2201	.2196	.2202	.2200	.2201	.2205
4	.2200	.2202	.2198	.2195	.2192	.2202	.2200	.2198	.2205
5	.2200	.2202	.2198	.2198	.2192	.2202	.2200	.2195	.2199
6	.2000	.2202	.2202	.2199	.2197	.2201	.2200	.2202	.2203
7	.2200	.2201	.2201	.2200	.2196	.2201	.2202	.2203	.2205
8	.2200	.2201	.2202	.2201	.2198	.2201	.2201	.2199	.2205
9	.2200	.2201	.2196	.2197	.2195	.2201	.2199	.2204	.2205
10	.2200	.2201	.2194	.2197	.2196	.2201	.2199	.2205	.2205
11	.2200	.2198	.2195	.2195	.2196	.2200	.2198	.2205	.2205
12	.2200	.2198	.2197	.2196	.2198	.2200	.2199	.2204	.2207
13	.2200	.2198	.2197	.2198	.2199	.2200	.2202	.2208	
14	.2200	.2001	.2199	.2199	.2199	.2201	.2203		
15	.2200	.2201	.2201	.2200	.2199	.2202			
16	.2200	.2200	.2200	.2200	.2199				
17	.2200	.2200	.2200	.2200	.2209				
18	.2200	.2199	.2199						
19	.2199	.2206							

REPORT
SA-TR11-5000

APPENDIX C

MALFUNCTION DATA

SUMMARY(1) Gun Serial No. 108860

<u>TOTAL</u>		<u>MALFUNCTION</u>
19	(FF)	FAIL TO FEED
1	(LBF)	BOLT NOT LOCKED
29	(HLB)	LIGHT BLOW *
22	(HFH)	HAMMER FOLLOW HOME
1	(XF)	FAIL TO EXTRACT
162	(JF)	FAIL TO EJECT
67	(MBR)	BOLT FAILED TO REMAIN OPEN AFTER LAST RD.
24	(MCI)	BOLT STOP INTERRUPTED FIRING CYCLE
11	(MSB)	SPIN BACK OF EMPTY CARTRIDGE INTO RECEIVER

336TOTAL MALFUNCTIONS

27000

ROUNDS FIRED

(2) GUN SERIAL NO 123225

SUMMARY

<u>TOTAL</u>	<u>MALFUNCTION</u>
10	(FF) FAIL TO FEED
0	(LBF) BOLT NOT LOCKED
17	(HLB) LIGHT BLOW
17	(HFH) HAMMER FOLLOW HOLE
0	(XF) FAIL TO EXTRACT
266	(JF) FAIL TO EJECT
200	(MBR) BOLT FAILED TO REMAIN OPEN AFTER LAST ROUND
11	(MCI) BOLT STOP INTERRUPTED FIRING CYCLE
16	(MSB) SPIN BACK OF EMPTY CARTRIDGE INTO RECEIVER
<hr/> 534	<u>TOTAL MALFUNCTIONS</u>
35,000	<u>ROUNDS FIRED</u>

APPENDIX C

REPORT
SA-TP11-5000(3) GUN SERIAL NO 118603

SUMMARY

<u>TOTAL</u>	<u>MALFUNCTION</u>
25	(FF) FAIL TO FEED
1	(FUR) FAIL TO FEED, UNDER RIDE
6	(HLB) LIGHT BLOW
4	(HFH) HAMMER FOLLOW HOME
2	(HFR) HAMMER FAILED TO RELEASE
197	(JF) FAIL TO EJECT
126	(MBR) BOLT FAILED TO REMAIN OPEN AFTER LAST RD
45	(MCI) BOLT STOP INTERRUPTED FIRING CYCLE
12	(MSB) SPIN BACK OF EMPTY CARTRIDGE INTO RECEIVER
1	(MRG) RUN AWAY GUN
1	(AMR) MISFIRE (AMMUNITION DEFECT)
<hr/> 419	<u>TOTAL GUN MALFUNCTIONS</u>
1	<u>AMMUNITION DEFECT</u>
35,000	<u>ROUNDS FIRED</u>

REPORT
SA-TR11-5000

APPENDIX C

SUMMARY

(4) Gun Serial No. 122033

<u>TOTAL</u>		<u>MALFUNCTIONS</u>
8	(FF)	FAIL TO FEED
1	(FOR)	OVER RIDE
3	(FUR)	UNDER RIDE
4	(CF)	FAIL TO CHAMBER
1	(LBF)	BOLT NOT LOCKED
2	(HLB)	LIGHT BLOW
10	(HFH)	HAMMER FOLLOW HOME
64	(JF)	FAIL TO EJECT
105	(MBR)	BOLT FAILED TO REMAIN OPEN AFTER LAST ROUND
25	(MCI)	BOLT STOP INTERRUPTED FIRING CYCLE
7	(MSB)	SPIN BACK OF EMPTY CARTRIDGE INTO RECEIVER
230		<u>TOTAL MALFUNCTIONS</u>
29000		ROUNDS FIRED

APPENDIX C

REPORT
SA-TR 11-5000SUMMARY(5) Gun Serial No. 113821

<u>TOTAL</u>		<u>MALFUNCTION</u>
44	(FF)	FAIL TO FEED
1	(FUR)	FAIL TO FEED UNDER RIDE
17	(HLB)	LIGHT BLOW
1	(HPH)	HAMMER FOLLOW HOME
138	(JF)	FAIL TO EJECT
677	(MBR)	BOLT FAIL TO LOCK TO REAR AFTER LAST ROUND
74	(MCI)	BOLT STOP INTERRUPTED FIRING CYCLE
2	(MSB)	SPIN BACK OF EMPTY CARTRIDGE INTO RECEIVER
3	(MM)	MAGAZINE, DEFECTIVE LIPS
<u>957</u>	<u>TOTAL MALFUNCTIONS</u>	
35000	ROUNDS FIRED	

SUMMARY

(6) Gun Serial No. 122994

<u>TOTAL</u>		<u>MALFUNCTIONS</u>
18	(FF)	FAIL TO FEED
1	(LBF)	BOLT NOT LOCKED
7	(HLB)	LIGHT BLOW
6	(HFH)	HAMMER FOLLOW HOME
4	(XF)	FAIL TO EXTRACT
190	(JF)	FAIL TO EJECT
86	(MBR)	BOLT FAILED TO REMAIN TO REAR AFTER LAST ROUND
13	(MCI)	BOLT STOP INTERRUPTED FIRING CYCLE
1	(MSB)	SPIN BACK OF EMPTY CART. INTO RECEIVER
326		<u>TOTAL MALFUNCTIONS</u>
30000		ROUNDS FIRED

APPENDIX C

REPORT
SA-TR11-5000

SUMMARY

(7) Gun Serial No. 121654

<u>TOTAL</u>		<u>MALFUNCTION</u>
2	(FF)	FAILURE TO FEED
21	(HLB)	LIGHT BLOW
152	(JF)	FAILURE TO EJECT
98	(MBR)	BOLT FAILED TO REMAIN OPEN AFTER LAST ROUND
1	(MSB)	SPIN BACK OF EMPTY CARTRIDGE INTO RECEIVER

274

TOTAL MALFUNCTIONS

22,000

ROUNDS FIRED

REPORT
SA-TR11-5000

APPENDIX C

SUMMARY

(8) Gun Serial No. 108860

<u>TOTAL</u>		<u>MALFUNCTION</u>
4	(FF)	FAIL TO FEED
18	(HLB)	LIGHT BLOW
8	(XF)	FAIL TO EXTRACT
82	(JF)	FAIR TO EJECT
163	(MBR)	BOLT FAILED TO REMAIN OPEN AFTER LAST RD
6	(MCI)	BOLT STOP INTERRUPTED FIRING CYCLE
3	(MSB)	SPIN BACK OF EMPTY CARTRIDGE INTO RECEIVER

284

TOTAL MALFUNCTIONS

21,000

ROUNDS FIRED

APPENDIX C

REPORT
SA-TR11-5000SUMMARY

(9) Gun Serial No. 109068

<u>TOTAL</u>		<u>MALFUNCTION</u>
40	(FF)	FAIL TO FEED
10	(FDF)	DOUBLE FEED
3	(FOR)	FAIL TO FEED, OVER RIDE
1	(CF)	FAIL TO CHAMBER
23	(HLB)	LIGHT BLOW
4	(HFM)	HAMMER FOLLOW HOME
10	(XF)	FAIL TO EXTRACT
287	(JF)	FAIL TO EJECT
86	(MBR)	BOLT FAILED TO REMAIN OPEN AFTER LAST ROUND
16	(MCI)	BOLT STOP INTERRUPTED FIRING CYCLE
14	(MSB)	SPIN BACK OF EMPTY CART. CASE INTO RECEIVER
494		TOTAL MALFUNCTIONS
27000		ROUNDS FIRED

(10) GUN SERIAL NO 105083

SUMMARY

<u>TOTAL</u>	<u>MALFUNCTIONS</u>
17	(FF) FAIL TO FEED
1	(FDF) DOUBLE FEED
1	(LBF) BOLT NOT FULLY LOCKED
5	(HFH) HAMMER FOLLOW HOME
5	(HLB) LIGHT BLOW
3	(XF) FAIL TO EXTRACT
129	(JF) FAIL TO EJECT
70	(MBR) BOLT FAIL TO REMAIN OPEN AFTER LAST ROUND
5	(MSB) SPIN BACK OF EMPTY CARTRIDGE CASE INTO RECEIVER.
11	(MCI) BOLT STOP INTERRUPTED FIRING CYCLE.
<hr/>	
247	TOTAL GUN MALFUNCTIONS
19,000	ROUNDS FIRED

APPENDIX G

REPORT
SA-TR11-5000SUMMARY(11) Gun Serial No. 109085

<u>TOTAL</u>		<u>MALFUNCTION</u>
2	(FF)	FAIL TO FEED
1	(FUR)	FAIL TO FEED, BOLT UNDERRIDE
5	(HLB)	LIGHT BLOW
4	(HFR)	HAMMER FAILED TO RELEASE
3	(XF)	FAIL TO EXTRACT
81	(JF)	FAIL TO EJECT
44	(MBR)	BOLT FAILED TO REMAIN OPEN AFTER LAST RD.
8	(MSB)	SPIN BACK OF EMPTY CARTRIDGE INTO RECEIVER

148TOTAL MALFUNCTIONS

25,000

ROUNDS FIRED

REPORT
SA-TR11-5000

APPENDIX G

(12) GUN SERIAL NO 122429

SUMMARY

<u>TOTAL</u>		
2	(FF)	FAIL TO FEED
6	(FDF)	DOUBLE FEED
2	(LBF)	BOLT FAIL TO LOCK
5	(HLB)	LIGHT BLOW
6	(XF)	FAIL TO EXTRACT
169	(JF)	FAIL TO EJECT
76	(MBR)	BOLT FAILED TO REMAIN OPEN AFTER LAST ROUND
2	(MSB)	SPIN BACK OF EMPTY CARTRIDGE CASE INTO RECEIVER
1	(MCL)	BOLT STOP INTERRUPTED FIRING CYCLE
1		AUTOMATIC FIRE DURING SEMI-AUTOMATIC FIRE
1		SEMI-AUTOMATIC FIRE DURING AUTOMATIC FIRE
<u>419</u>		TOTAL GUN MALFUNCTIONS
23000		ROUNDS FIRED

APPENDIX C

REPORT
SA-TP 11-5000

MALFUNCTIONS AND FAILURES

ENG JR
RES & ENG DIV

(1) Gun Serial No. 108860

MAL OR FAILURE	ROUNDS FIRED	TYPE FIRE	MAG NO.	MAL OR FAILURE	ROUNDS FIRED	TYPE FIRE	MAG NO.
MSB	640	A	-	FF	9440	S	7
HLB	742	A	-	FF	9480	S	9
HLB	745	A	-	MBR	9740	A	7
HLB	747	A	-	JF	9924	A	2
HLB	749	A	-	JF	9950	A	3
AUTO SEAR REPLACED	759	-	-	MCI	10067	S	4
MSB	1625	S	-	JF	10165	A	9
MSB	1629	S	-	JF	10190	A	10
MSB	2381	A	10	JF	10236	S	12
LBF	2501	A	1	JF	10279	S	14
MSB	2689	S	10	JF	10296	S	15
MSB	4067	S	4	JF	10306	A	1
MSB	4165	A	9	JF	10312	A	1
MSB	4173	A	9	JF	10318	A	1
MSB	4249	S	13	JF	10336	A	2
MSB	4494	S	10	JF	10339	A	2
MSB	4769	A	9	EJECTOR SPRING REPLACED	10360	-	-
FF	4902	A	1	FF	11019	S	1
FF	5640	S	7	MBR	11060	S	3
FF	6719	A	6	FF	11080	S	4
FF	7678	S	4	FF	11140	A	7
FF	8160	A	8	MBR	11260	S	13

MALFUNCTIONS AND FAILURES

ENG BR
RES & ENG DIV

(1) Gun Serial No. 108860

MAL OR FAILURE	ROUNDS FIRED	TYPE FIRE	MAG NO.	MAL OR FAILURE	ROUNDS FIRED	TYPE FIRE	MAG NO.
BOLT RINGS	13141	-	-	JF	14365	A	4
REPLACED							
EXTRACTOR	13428	-	-	JF	14366	A	4
REPLACED							
HLB	13515	A	11	JF	14546	A	13
HLB	13518	A	11	JF	14569	A	14
HLB	13548	A	13	MCI	14585	A	15
HLB	13574	A	14	JF	14607	S	1
HLB	13724	A	7	MCI	14608	S	1
HLB	13751	A	8	JF	14672	S	5
MCI	13910	A	1	MCI	14710	A	6
MCI	13915	A	1	JF	14738	A	7
BOLT & CARRIER	14000	-	-	JF	14745	A	8
REPLACED							
JF	14034	S	2	JF	14751	A	8
HLB	14122	A	7	MCI	14930	A	2
HAMMER SPRING	14122	-	-	JF	15004	S	1
REPLACED							
JF	14162	A	9	JF	15156	A	8
JF	14251	S	13	MCI	15170	A	9
JF	14273	S	14	JF	15187	A	10
JF	14282	S	15	JF	15275	S	14
JF	14291	S	15	JF	15317	A	1
JF	14312	A	1	MCI	15330	A	2
MCI	14325	A	2	JF	15350	A	3
JF	14351	A	3	JF	15368	A	4

APPENDIX C

REPORT
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MALFUNCTIONS AND FAILURES

ENG BR
RES & ENG DIV

(1) Gun Serial No. 108860

MAL OR FAILURE	ROUNDS FIRED	TYPE FIRE	MAG NO.	MAL OR FAILURE	ROUNDS FIRED	TYPE FIRE	MAG NO.
JF	15393	A	5	JF	15912	A	1
JF	15439	S	7	JF	15921	A	2
JF	15484	S	10	JF	15950	A	3
JF	15517	A	11	JF	15375	A	4
JF	15531	A	12	JF	16002	S	1
JF	15540	A	12	EJECTOR SPRING 16100 REPLACED		-	-
MCI	15570	A	14	JF	16179	A	9
JF	15586	A	15	JF	16319	A	1
JF	15588	A	15	MCI	16439	S	7
JF	15626	S	2	MCI	16639	A	12
FF	15630	S	2	MCI	16649	A	13
BOLT CARRIER KEY TIGHTENED	15630	-	-	FF	16599	A	15
JF	15710	A	6	MBR	16760	A	8
JF	15715	A	6	MCI	16919	A	1
JF	15736	A	7	JF	17338	A	2
MCI	15770	A	9	HFH	17358	A	3
JF	15810	S	11	JF	17398	A	5
JF	15817	S	11	JF	17478	S	9
JF	15848	S	13	MCI	17479	S	9
JF	15854	S	13	HFH	17525	A	11
JF	15864	S	14	HFH	17526	A	11
JF	15877	S	14	HFH	17527	A	11

MALFUNCTIONS AND FAILURES

ENG BR
RES & ENG DIV

(1) Gun Serial No. 108860

MAL OR FAILURE	ROUNDS FIRED	TYPE FIRE	MAG NO.	MAL OR FAILURE	ROUNDS FIRED	TYPE FIRE	MAG NO.
JF	17535	A	12	JF	17829	S	12
JF	17536	A	12	JF	17830	S	12
HFH	17550	A	13	GUIDE ASSY REPLACED	17830	-	-
HFH	17551	A	13	MBR	17880	S	14
HFH	17552	A	13	XF	17922	A	2
HFH	17575	A	14	MBR	17940	A	3
HFH	17576	A	14	MBR	18000	A	5
HFH	17577	A	14	MBR	18120	A	6
HFH	17583	A	15	MBR	18140	A	7
HFH	17584	A	15	MBR	18160	A	8
HFH	17585	A	15	MBR	18180	A	9
JF	17697	S	5	MBR	18200	A	10
HFH	17709	A	6	MBR	18220	S	11
HFH	17710	A	6	JF	18300	S	15
HFH	17711	A	6	MBR	18340	A	2
HFH	17730	A	7	MBR	18400	A	5
HFH	17731	A	7	MBR	18440	S	7
HFH	17732	A	7	MBR	18460	S	8
HFH	17745	A	8	MBR	18480	S	9
HFH	17746	A	8	MBR	18500	S	10
HFH	17747	A	8	MBR	18520	A	11
JF	17814	S	11	MBR	18540	A	12

APPENDIX G

REPORT
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MALFUNCTIONS AND FAILURES

ENG BR
RES & ENG DIV

(1) Gun Serial No. 108860

MAL OR FAILURE	ROUNDS FIRED	TYPE FIRE	MAG NO.	MAL OR FAILURE	ROUNDS FIRED	TYPE FIRE	MAG NO.
JF	18550	A	13	MBR	19500	S	10
MBR	18560	A	13	MBR	19560	A	13
MBR	18580	A	14	MBR	19580	A	14
MBR	18620	S	1	MBR	19800	A	10
MBR	18640	S	2	MBR	19940	A	2
MBR	18660	S	3	MBR	19980	A	4
MBR	18680	S	4	MBR	20600	A	15
MBR	18760	A	8	MBR	20720	A	6
MBR	18780	A	9	FF	20722	A	7
MBR	18800	A	10	MBR	20840	S	13
MBR	18860	S	13	MBR	20860	S	14
MBR	18880	S	14	MBR	20900	S	15
MBR	18900	S	15	FF	20989	A	5
MBR	18940	A	2	FF	21140	A	7
JF	18960	A	3	FF	21440	S	7
MCI	19125	A	7	MBR	21860	S	13
MBR	19180	A	9	MBR	21880	S	14
BOLT REPLACED	19220	-	-	EXTRACTOR SPRING REPLACED	22000	-	-
MBR	19280	S	14	MBR	22200	A	10
MBR	19320	A	1	MBR	22380	A	4
MBR	19400	A	5	MBR	22500	S	10
MBR	19490	S	9	MBR	22560	A	13

MALFUNCTIONS AND FAILURES

ENG BR
RES & ENG DIV

(1) Gun Serial No. 108860

MAL OR FAILURE	ROUNDS FIRED	TYPE FIRE	MAG NO.	MAL OR FAILURE	ROUNDS FIRED	TYPE FIRE	MAG NO.
MBR	22580	A	14	HLB	23470	S	8
MBR	22600	A	15	JF	23471	S	8
MBR	22640	S	2	JF	23472	S	8
MBR	22760	A	8	JF	23473	S	8
MBR	22800	A	10	JF	23488	S	9
MBR	22960	A	3	JF	23489	S	9
JF	23159	A	8	HLB	23523	A	12
MBR	23160	A	8	HLB	23524	A	12
HLB	23181	A	10	JF	23525	A	12
HLB	23202	S	11	JF	23526	A	12
HLB	23222	S	12	HLB	23628	S	1
HLB	23242	S	13	HLB	23629	S	1
HLB	23272	S	14	HLB	23632	S	2
HLB	23282	S	15	HLB	23633	S	2
MBR	23360	A	3	JF	23699	S	5
JF	23368	A	4	JF	23700	S	5
JF	23369	A	4	MBR	23760	A	8
HLB	23381	A	5	JF	23809	S	11
HLB	23417	S	6	JF	23857	S	13
HLB	23430	S	7	JF	23875	S	14
HLB	23468	S	8	JF	23876	S	14
HLB	23469	S	8	JF	23877	S	14

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MALFUNCTIONS AND FAILURES

ENG BR
RES & ENG DIV

(1) Gun Serial No. 108860

MAL OR FAILURE	ROUNDS FIRED	TYPE FIRE	MAG NO.	MAL OR FAILURE	ROUNDS FIRED	TYPE FIRE	MAG NO.
FF	23888	S	15	EXTRACTOR PIN REPLACED	24880	-	-
FF	23917	A	1	JF	24900	S	15
JF	23922	A	2	MBR	24980	A	4
JF	23923	A	2	JF	25000	A	5
JF	23924	A	2	JF	25052	S	3
JF	23950	A	3	JF	25076	S	4
JF	23951	A	3	JF	25079	S	4
JF	23952	A	3	JF	25083	S	5
JF	23970	A	4	JF	25086	S	5
*JF	23971	A	4	JF	25113	A	6
JF	24133	A	7	JF	25139	A	7
JF	24195	A	10	JF	25258	S	13
JF	24355	A	4	JF	25262	S	14
JF	24470	S	9	JF	25276	S	14
MBR	24580	A	14	JF	25278	S	14
JF	24586	A	15	JF	25378	A	4
JF	24670	S	4	JF	25379	A	4
JF	24675	S	4	JF	25437	S	7
FF	24710	A	7	JF	25438	S	7
JF	24750	A	10	JF	25452	S	8
JF	24875	S	14	MCI	25459	S	8
JF	24880	S	14	JF	25611	S	1
				JF	25616	S	1

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MALFUNCTIONS AND FAILURES

ENG BR
RES & ENG DIV

(1) Gun Serial No. 108860

MAL OR FAILURE	ROUNDS FIRED	TYPE FIRE	MAG NO.	MAL OR FAILURE	ROUNDS FIRED	TYPE FIRE	MAG NO.
JF	25622	S	2	JF	25872	S	14
JF	25638	S	2	JF	25874	S	14
JF	25647	S	3	JF	25876	S	14
JF	25665	S	4	JF	25890	S	15
JF	25668	S	4	JF	25898	S	15
JF	25682	S	5	JF	25902	A	1
JF	25693	S	5	JF	25907	A	1
JF	25702	A	6	JF	25914	A	1
JF	25718	A	6	JF	26004	S	1
JF	25719	A	6	JF	26018	S	1
MCI	25739	A	7	EJECTOR SPRING REPLACED	26100	-	-
JF	25750	A	8	MCI	26119	A	7
JF	25790	A	10	JF	26170	A	8
JF	25791	A	10	MCI	26179	A	9
JF	25795	A	10	MCI	26300	A	1
JF	25830	S	12	JF	26372	A	4
JF	25841	S	13	MCI	26419	S	7
JF	25843	S	13	EXTRACTOR SPRING REPLACED	26478	-	-
JF	25847	S	13	JF	26792	S	5
JF	25851	S	13				
JF	25857	S	13				
JF	25870	S	14				

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MALFUNCTIONS AND FAILURES

(2) Gun Serial No. 123225

ENG BR
RES & ENG DIV
19 May 65

MAL OR FAILURE	ROUNDS FIRED	TYPE FIRE	MAG NO.	MAL OR FAILURE	ROUNDS FIRED	TYPE FIRE	MAG NO.
MSB	1304	A	16	MBR	7160	A	22
MSB	1571	A	29	MBR	7180	A	24
MSB	2701	A	16	MBR	7200	A	25
MSB	2764	A	19	MBR	7380	A	19
MSB	3318	A	16	EJECTOR SPRING 8000 REPLACED		-	-
MSB	3955	A	18	FF	10600	A	30
MSB	3970	A	19	BOLT RINGS REPLACED	11000	-	-
FF	5103	A	26	BUFFER RINGS REPLACED	11000	-	-
JF	5124	A	27	JF	11221	S	26
JF	5411	S	26	JF	11231	S	27
JF	5498	S	30	MBR	11240	S	27
JF	5504	A	16	JF	11283	S	30
MBR	5760	A	28	JF	11303	A	17
MBR	5960	A	23	JF	11307	A	17
MBR	6200	A	25	JF	11318	A	17
MBR	6360	A	18	JF	11323	A	18
MBR	6400	A	20	EJECTOR SPRING 11360 REPLACED		-	-
MBR	6580	A	29	HLB	11600	A	20
MBR	6720	A	21	HAMMER SPRING 11600 REPLACED		-	-
MBR	6760	A	23	HLB	12545	A	28
MBR	6980	A	18	HLB	12549	A	28

* NUMEROUS MBR's WERE NOT RECORDED BETWEEN 10,000 and 11,000 RDS.

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MALFUNCTIONS AND FAILURES

(2) Gun Serial No. 123225

ENG BR
RES & ENG DIV
19 May 65

MAL OR FAILURE	ROUNDS FIRED	TYPE FIRE	MAG NO.	MAL OR FAILURE	ROUNDS FIRED	TYPE FIRE	MAG NO.
HLB	12555	A	28	MBR	14440	S	22
HLB	12566	A	29	MBR	14450	S	23
HLB	12572	A	29	MBR	14480	S	24
HLB	12578	A	29	MBR	14500	S	25
HLB	12705	A	21	MBR	14520	A	26
HLB	12710	A	21	MBR	14540	A	27
HLB	12715	A	21	MBR	14560	A	28
HLB	13324	A	16	MBR	14580	A	29
HLB	13338	A	17	MBR	14620	S	16
HLB	13341	A	18	MBR	14640	S	17
HLB	13371	A	19	MBR	14700	S	20
HLB	13382	A	20	MBR	14720	A	21
BOLT RINGS REPLACED	13540	-	-	MBR	14740	A	22
BOLT & CARRIER REPLACED	14000	-	-	MBR	14800	A	25
MBR	14060	S	18	MBR	14840	S	27
MBR	14120	A	21	MBR	15120	A	21
MBR	14160	A	23	MBR	15160	A	23
MBR	14180	A	24	MBR	15220	S	26
MCI	14219	S	26	MBR	15240	S	27
MBR	14300	S	30	MBR	15280	S	29

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MALFUNCTIONS AND FAILURES

(2) Gun Serial No. 123225

ENG BR
RES & ENG DIV
19 May 65

MAL OR FAILURE	ROUNDS FIRED	TYPE FIRE	MAG NO.	MAL OR FAILURE	ROUNDS FIRED	TYPE FIRE	MAG NO.
MBR	15300	S	30	MBR	15840	S	27
MBR	15320	A	16	MBR	15880	S	29
MBR	15340	A	17	MBR	16020	S	16
MBR	15380	A	19	MBR	16040	S	17
MBR	15400	A	20	MBR	16080	S	19
MBR	15420	S	21	MBR	16100	S	20
MBR	15440	S	22	MBR	16120	A	21
MBR	15460	S	23	MBR	16140	A	22
MBR	15500	S	25	MBR	16160	A	23
MBR	15540	A	27	MBR	16180	A	24
MBR	15560	A	28	MBR	16200	A	25
MBR	15580	A	29	MBR	16220	S	26
MBR	15600	A	30	MBR	16240	S	27
MBR	15620	S	16	MBR	16280	S	29
MBR	15680	S	19	MBR	16300	S	30
MBR	15700	S	20	MBR	16320	A	16
MCI	15710	A	21	MBR	16340	A	17
MCI	15715	A	21	MBR	16380	A	19
MBR	15760	A	23	FF	16479	S	24
MBR	15780	A	24	MCI	16505	A	26
MBR	15820	S	26	MCI	16510	A	26

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MALFUNCTIONS AND FAILURES

(2) Gun Serial No. 123225

ENG BR
RES & ENG DIV
19 May 65

MAL OR FAILURE	ROUNDS FIRED	TYPE FIRE	MAG NO.	MAL OR FAILURE	ROUNDS FIRED	TYPE FIRE	MAG NO.
MCI	16525	A	27	MBR	17800	A	25
MCI	16530	A	27	MBR	17900	S	30
HFH	16715	A	21	MBR	17920	A	16
MBR	16760	A	23	HFH	17924	A	17
MBR	16860	S	28	HFH	17937	A	18
MBR	16900	S	30	MBR	17980	A	19
MBR	16940	A	17	MBR	18000	A	20
MCI	17379	A	18	ACTION SPRING REPLACED	18000	-	-
JF	17402	S	21	MBR	18100	S	20
MBR	17460	S	23	MBR	18120	A	21
MBR	17520	A	26	MBR	18160	A	23
MBR	17540	A	27	MBR	18180	A	24
MBR	17560	A	28	MBR	18200	A	25
MBR	17580	A	29	JF	18218	S	26
MBR	17600	A	30	MBR	18220	S	26
MBR	17640	S	17	JF	18223	S	27
MBR	17660	S	18	MBR	18240	S	27
MBR	17700	S	19	JF	18268	S	29
MBR	17720	A	21	JF	18277	S	30
MBR	17760	A	23	MBR	18280	S	30
MBR	17780	A	24	MBR	18340	A	16

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MALFUNCTIONS AND FAILURES

ENG BR
RES & ENG DIV
19 May 65

(2) Gun Serial No. 123225

MAL OR FAILURE	ROUNDS FIRED	TYPE FIRE	MAG NO.	MAL OR FAILURE	ROUNDS FIRED	TYPE FIRE	MAG NO.
MBR	18380	A	19	JF	18835	S	28
MBR	18400	A	20	JF	18836	S	28
MBR	18420	S	21	JF	18837	S	28
JF	18427	S	22	JF	18848	S	28
JF	18448	S	23	JF	18849	S	28
MBR	18480	S	29	JF	18850	S	28
MBR	18500	S	25	MBR	18900	S	30
JF	18518	A	26	JF	18918	A	16
MBR	18540	A	27	MBR	18960	A	18
JF	18552	A	28	JF	19089	S	20
MBR	18620	S	16	JF	19164	A	24
MBR	18640	S	17	JF	19224	S	27
JF	18644	S	18	JF	19225	S	27
JF	18645	S	18	JF	19226	S	27
JF	18646	S	18	JF	19227	S	27
MBR	18680	S	19	FF	19242	S	28
MBR	18700	S	20	JF	19261	S	29
JF	18719	A	21	JF	19264	S	29
MBR	18720	A	21	JF	19266	S	30
MBR	18760	A	23	JF	19276	S	30
MBR	18800	A	25	JF	19305	A	16

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MALFUNCTIONS AND FAILURES

(2) Gun Serial No. 123225

ENG BR
RES & ENG DIV
19 May 65

MAL OR FAILURE	ROUNDS FIRED	TYPE FIRE	MAG NO.	MAL OR FAILURE	ROUNDS FIRED	TYPE FIRE	MAG NO.
JF	19310	A	16	JF	19741	A	23
JF	19315	A	16	JF	19832	S	27
JF	19330	A	17	JF	19874	S	29
JF	19350	A	18	JF	19875	S	29
JF	19380	A	19	JF	19931	A	17
EJECTOR SPRING REPLACED	19380	-	-	JF	19972	A	19
JF	19405	S	21	JF	19973	A	19
JF	19448	S	23	JF	20012	S	16
JF	19449	S	23	JF	20026	S	17
JF	19475	S	24	JF	20033	S	17
JF	19500	S	25	JF	20034	S	17
BOLT KEY TIGHTENED	19500	-	-	JF	20037	S	17
JF	19525	A	27	JF	20044	S	18
JF	19545	A	28	JF	20066	S	19
JF	19572	A	29	JF	20067	S	19
MBR	19580	A	29	JF	20090	S	20
MBR	19600	A	30	JF	20202	S	26
JF	19604	S	16	JF	20209	S	26
JF	19607	S	16	JF	20224	S	27
JF	19625	S	17	JF	20251	S	28
JF	19630	S	17	JF	20284	S	30

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MALFUNCTIONS AND FAILURES

(2) Gun Serial No. 123225

ENG BR
RES & ENG DIV
19 May 65

MAL OR FAILURE	ROUNDS FIRED	TYPE FIRE	MAG NO.	MAL OR FAILURE	ROUNDS FIRED	TYPE FIRE	MAG NO.
JF	20286	S	30	JF	20571	A	29
JF	20297	S	30	JF	20582	A	30
FF	20308	A	16	JF	20589	A	30
FF	20309	A	16	JF	20593	A	30
FF	20310	A	16	JF	20598	A	30
FF	20323	A	17	JF	20604	S	16
BOLT KEY TIGHTENED	20400	-	-	JF	20608	S	16
JF	20406	S	21	JF	20616	S	16
MBR	20420	S	21	JF	20625	S	17
JF	20428	S	22	JF	20627	S	17
JF	20448	S	23	JF	20629	S	17
JF	20452	S	23	BOLT REPLACED	20630	-	-
JF	20468	S	24	MBR	20760	A	22
JF	20479	S	24	MBR	20840	S	27
JF	20496	S	25	MBR	20860	S	27
JF	20517	A	26	MBR	20900	S	30
JF	20535	A	27	JF	20977	A	19
MBR	20540	A	27	MBR	21180	A	24
JF	20555	A	28	MBR	21240	S	27
MBR	20560	A	28	MBR	21340	A	17
JF	20566	A	29	MBR	21380	A	19

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MALFUNCTIONS AND FAILURES

(2) Gun Serial No. 123225

ENG BR
RES & ENG DIV
19 May 65

MAL OR FAILURE	ROUNDS FIRED	TYPE FIRE	MAG NO.		MAL OR FAILURE	ROUNDS FIRED	TYPE FIRE	MAG NO.
MBR	21500	S	25		JF	22893	S	30
MBR	21520	A	26		MBR	22920	A	16
MBR	21540	A	27	EXTRACTOR SPRING	22920	-	-	
JF	21677	S	19	REPLACED	JF	22940	A	17
JF	21700	S	20		MBR	22960	A	18
MBR	21760	A	23		JF	22975	A	19
JF	21862	S	27		JF	22976	A	19
MBR	22020	S	16		MBR	23000	A	20
MBR	22040	S	17		JF	23094	S	20
MBR	22100	S	20		JF	23159	A	21
JF	22472	S	24		JF	23215	S	26
MBR	22500	S	25		JF	23216	S	26
MBR	22560	A	28		JF	23251	S	28
JF	22589	A	27		JF	23252	S	28
JF	22658	S	17		MBR	23260	S	28
JF	22654	S	18		JF	23268	S	30
JF	22689	S	19		JF	23269	S	30
JF	22699	S	20		JF	23270	S	30
MBR	22760	A	23		JF	23271	S	30
MBR	22800	A	25	EXTRACTOR PIN	23300	-	-	
JF	22892	S	30	REPLACED	JF	23338	A	17

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MALFUNCTIONS AND FAILURES

(2) Gun Serial No. 123225

ENG BR
RES & ENG DIV
19 May 65

MAL OR FAILURE	ROUNDS FIRED	TYPE FIRE	MAG NO.	MAL OR FAILURE	ROUNDS FIRED	TYPE FIRE	MAG NO.
JF	23379	A	19	JF	24539	A	27
JF	23388	A	20	JF	24583	A	30
MBR	23460	S	23	JF	24613	S	16
MBR	23480	S	24	MBR	24620	S	16
JF	23497	S	25	JF	24900	S	30
JF	23540	A	27	HAMMER SPRING REPLACED BOLT REPLACED	25000	-	-
JF	23558	A	28		25000	-	-
JF	23598	A	30		25072	S	19
JF	23614	S	16	MBR	25240	S	27
JF	23629	S	17	MBR	25300	S	30
JF	23689	S	19	MBR	25380	A	19
JF	23691	S	20	MBR	25480	S	24
JF	23723	A	22	JF	25498	S	25
JF	23743	A	23	MBR	25560	A	28
MBR	23880	S	29	JF	25674	S	19
JF	23891	S	30	JF	25698	S	20
MBR	24340	A	17	JF	25796	A	25
JF	24473	S	24	JF	25797	A	25
JF	24478	S	24	JF	25798	A	25
MBR	24500	S	25	JF	25912	A	16
MBR	24520	A	26	JF	26218	S	26

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MALFUNCTIONS AND FAILURES

(2) Gun Serial No. 123225

ENG BR
RES & ENG DIV
19 May 65

MAL OR FAILURE	ROUNDS FIRED	TYPE FIRE	MAG NO.	MAL OR FAILURE	ROUNDS FIRED	TYPE FIRE	MAG NO.
JF	26250	S	28	JF	27372	A	19
JF	26256	S	28	JF	27374	A	19
JF	26272	S	29	JF	27396	A	20
JF	26290	S	30	JF	27398	A	20
JF	26292	S	30	MBR	27480	S	24
JF	26296	S	30	JF	27515	A	26
JF	26465	A	18	JF	27536	A	27
JF	26472	A	19	JF	27547	A	28
JF	26478	A	19	JF	27570	A	29
MBR	26480	A	20	JF	27578	A]	29
JF	26511	A	26	JF	27708	A	21
JF	26551	A	28	JF	27717	A	21
JF	26574	A	29	MSB	27754	A	23
JF	26598	A	30	JF	27762	A	24
JF	26739	S	17	MCI	27762	A	24
JF	26797	S	20	MSB	27784	A	25
JF	26874	A	24	MSB	27798	A]	25
JF	26915	A	16	JF	27934	A	16
MBR	26940	A	17	JF	27942	A	17
EXTRACTOR REPLACED	26966	-	-	MSB	27945	A	17
MCI	27060	S	18	HLB	27960	A	18

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MALFUNCTIONS AND FAILURES

(2) Gun Serial No. 123225

ENG BR
RES & ENG DIV
19 May 65

MAL OR FAILURE	ROUNDS FIRED	TYPE FIRE	MAG NO.	MAL OR FAILURE	ROUNDS FIRED	TYPE FIRE	MAG NO.
HLB	27961	A	19	HFH	29405	S	21
MCI	28725	S	20	HFH	29408	S	21
JF	28732	A	22	HFH	29421	S	22
MSB	28791	A	25	HFH	29428	S	22
JF	28917	A	16	HFH	29435	S	22
MSB	28934	A	17	GUIDE ASSY REPLACED	29458	-	-
FF	28958	A	18	JF	29578	A	29
JF	28966	A	19	JF	29638	S	17
JF	28968	A	19	JF	29655	S	18
JF	28978	A	19	EXTRACTOR SPRING REPLACED	29772	-	-
MSB	28993	A	20	EXTRACTOR PIN REPLACED	29772	-	-
MBR	29140	A	22	JF	30160	A	23
HFH	29309	A	16	MSB	30260	S	28
HFH	29314	A	16	MBR	30300	S	30
HFH	29322	A	17	MBR	30320	A	16
HFH	29323	A	17	JF	30623	S	17
HFH	29325	A	17	JF	31083	S	20
HFH	29327	A	17	JF	31178	A	24
HFH	29362	A	19	JF	31179	A	24
HFH	29366	A	19	JF	31180	A	24
HFH	29385	A	20	EXTRACTOR SPRING REPLACED	31180	-	-

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MALFUNCTIONS AND FAILURES

(2) Gun Serial No. 123225

ENG BR
RES & ENG DIV
19 May 65

MAL OR FAILURE	ROUNDS FIRED	TYPE FIRE	MAG NO.	MAL OR FAILURE	ROUNDS FIRED	TYPE FIRE	MAG NO.
JF	31199	A	25	MBR	32680	S	19
MBR	31220	S	26	MBR	32700	S	20
MBR	31420	S	21	JF	32776	A	23
MBR	31440	S	22	MBR	32780	A	24
MBR	31460	S	23	MBR	32820	S	26
MBR	31480	S	24	MBR	32840	S	27
MBR	31580	A	29	JF	32844	S	28
MBR	32180	A	24	MBR	32860	S	28
MBR	32200	A	25	MBR	32969	A	19
MBR	32220	S	26	BOLT REPLACED	32969	-	-
MBR	32240	S	27	MBR	33100	S	25
FF	32251	S	28	JF	33132	A	27
MBR	32260	S	28	JF	33187	A	30
MBR	32280	S	29	JF	33223	S	17
MBR	32300	S	30	JF	33227	S	17
MBR	32340	A	17	JF	33229	S	17
MBR	32400	A	20	JF	33242	S	18
MBR	32500	S	25	JF	33249	S	18
MBR	32540	A	27	JF	33257	S	18
MBR	32580	A	29	JF	33267	S	19
MBR	32660	S	18	JF	33270	S	19

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MALFUNCTIONS AND FAILURES

(2) Gun Serial No. 123225

ENG BR
RES & ENG DIV
19 May 65

MAL OR FAILURE	ROUNDS FIRED	TYPE FIRE	MAG NO.	MAL OR FAILURE	ROUNDS FIRED	TYPE FIRE	MAG NO.
JF	33274	S	19	JF	34245	S	28
JF	33276	S	19	JF	34250	S	28
MBR	33280	S	19	JF	34258	S	28
JF	33281	S	20	JF	34263	S	29
JF	33287	S	20	JF	34267	S	29
JF	33292	S	20	JF	34270	S	29
JF	33296	S	20	JF	34278	S	29
MBR	33320	A	21	JF	34305	A	16
EJECTOR SPRING REPLACED	33300	-	-	JF	34312	A	16
MBR	33380	A	25	JF	34316	A	16
JF	33572	A	19	JF	34318	A	16
JF	33596	A	20	JF	34326	A	17
JF	33655	S	24	JF	34330	A	17
JF	33804	S	17	JF	34333	A	17
JF	33810	S	17	JF	34339	A	17
JF	33815	S	17	JF	34341	A	18
JF	33819	S	17	JF	34345	A	18
JF	33919	A	22	JF	34348	A	18
JF	34151	A	23	JF	34350	A	18
JF	34239	S	27	JF	34362	A	19
JF	34242	S	28	JF	34365	A	19

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APPENDIX C

MALFUNCTIONS AND FAILURES

(2) Gun Serial No. 123225

ENG BR
RES & ENG DIV
19 May 65

MAL OR FAILURE	ROUNDS FIRED	TYPE FIRE	MAG NO.	MAL OR FAILURE	ROUNDS FIRED	TYPE FIRE	MAG NO.
JF	34368	A	19				
JF	34372	A	19				
JF	34377	A	19				
JF	34385	A	20				
JF	34390	A	20				
JF	34397	A	20				
EJECTOR SPRING REPLACED	34400	-	-				
JF	34611	A	26				
JF	34643	A	28				
JF	34655	A	28				
JF	34684	A	30				
JF	34692	A	30				
JF	34756	S	19				
MSB	34877	S	29				

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SA-TR11-5000MALFUNCTIONS AND FAILURES
(3) Gun Serial No. 118603ENG BR
RES & ENG DIV
19 May 65

MALFUNCTION OR FAILURE	ROUNDS FIRED	TYPE FIRE	MAG NO.	MALFUNCTION OR FAILURE	ROUNDS FIRED	TYPE FIRE	MAG NO.
MSB	617	A	34	MSB	4728	A	42
MSB	1252	S	43	MBR	5020	S	41
MSB	1391	A	34	MBR	5120	A	31
MSB	1488	S	40	HFR	5136	A	32
MSB	1624	S	32	MBR	5200	A	35
FF	1664	S	34	MBR	5220	S	36
MSB	2102	A	41	MBR	5280	S	39
MSB	2231	S	32	MBR	5300	S	40
MBR	2680	S	44	MBR	5320	A	41
MBR	2740	A	37	MBR	5340	A	42
MBR	3400	A	35	MBR	5360	A	43
MBR	3440	S	37	MBR	5400	A	45
MBR	3460	S	38	MBR	5420	S	31
MBR	3540	A	42	MBR	5500	S	35
MBR	3560	A	43	MBR	5680	S	44
MBR	3740	A	37	MBR	5700	S	45
MBR	3760	A	38	MBR	5740	A	47
MBR	3780	A	39	MBR	5860	S	33
MBR	3800	A	40	MBR	5880	S	34
MBR	3900	S	45	JF	6198	A	35
MBR	3920	A	31	MBR	6340	S	42
EXTRACTOR PIN REPLACED	4044	-	-	MBR	6360	S	43
MBR	4100	S	40	MBR	6380	S	44
FF	4118	A	41	MBR	6400	S	45

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MALFUNCTIONS AND FAILURES

(3) Gun Serial No. 118603

APPENDIX C

ENG BR
RES & ENG DIV
19 May 65

MALFUNCTION OR FAILURE	ROUNDS FIRED	TYPE FIRE	MAG NO.	MALFUNCTION OR FAILURE	ROUNDS FIRED	TYPE FIRE	MAG NO.
MBR	4140	A	42	JF	6643	S	43
MBR	4180	A	1	MBR	6660	S	43
EXTRACTOR REPLACED	4365	A	39	MBR	6720	A	31
JF	6744	A	32	JF	10876	S	44
MBR	6760	A	33	JF	11739	A	37
FF	6778	A	34	JF	11797	A	40
AMR	8294	S	45	JF	12013	S	31
JF	8495	S	40	JF	12133	A	37
JF	8505	A	41	MC1	12135	A	37
JF	8538	A	42	MBR	12200	A	40
JF	8570	A	44	JF	12314	A	31
JF	8612	S	31	JF	12396	A	35
JF	8772	A	39	JF	12526	A	42
JF	8833	S	42	JF	12578	A	44
JF	8843	S	43	MC1	12739	A	37
JF	9030	A	32	JF	12763	A	38
JF	9073	A	34	JF	12789	A	40
JF	9077	A	34	JF	12837	S	41
JF	9078	A	34	JF	12915	A	31
JF	9444	S	43	JF	12921	A	32
JF	9530	A	31	JF	12946	A	33
HFR	9781	A	44	JF	12964	A	34
JF	9957	A	38	JF	12985	A	35

MALFUNCTIONS AND FAILURES

APPENDIX G

(3) Gun Serial No. 118603

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MALFUNCTION OR FAILURE	ROUNDS FIRED	TYPE FIRE	MAG NO.	MALFUNCTION OR FAILURE	ROUNDS FIRED	TYPE FIRE	MAG NO.
JF	10003	S	31	JF	13006	S	31
JF	10070	S	34	JF	13577	A	44
JF	10215	S	41	JF	13604	A	45
JF	10325	A	32	MC1	13635	S	32
JF	10580	A	44	JF	13719	A	36
JF	10778	A	39	MC1	13756	A	38
JF	10836	S	42	HLB	13781	A	40
MC1	13836	S	42	JF	15970	A	34
Extractor Pin Spring (RPL)	13842	S	43	Bolt & Carrier (Replaced)	16000	-	-
JF	13883	S	45	JF	16076	S	34
JF	13937	A	32	JF	16092	S	35
JF	13955	A	33	JF	16108	A	36
JF	13974	A	34	JF	16183	A	40
JF	13987	A	35	Extractor & Ejector Sprs (Replaced)	16200	-	-
MBR	14020	S	31	MBR	16300	S	45
JF	14098	A	36	MC1	16312	A	31
MBR	14100	A	36	MC1	16525	A	42
HFH	14147	A	38	JF	16587	A	45
JF	14215	A	40	JF	16530	S	31
MBR	14360	A	33	JF	16667	S	34
MBR	14380	A	34	JF	16873	S	44
MC1	14390	A	35	JF	17310	A	31
MC1	14533	A	42	JF	17389	A	35
Hammer Spring (Replaced)	14620	-	-	MBR	17560	A	43

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MALFUNCTIONS AND FAILURES

(3) Gun Serial No. 118603

APPENDIX G

MALFUNCTION OR FAILURE	ROUNDS FIRED	TYPE FIRE	MAG NO.	MALFUNCTION OR FAILURE	ROUNDS FIRED	TYPE FIRE	MAG NO.
MC1	14651	S	33	MBR	17600	A	45
MC1	14747	A	38	MBR	17640	S	32
*MRG	15010	S	31	MBR	17680	S	34
MC1	15073	S	34	MBR	17720	A	36
JF	15199	A	40	MBR	17740	A	37
MC1	15275	S	44	MBR	17760	A	38
MC1	15391	S	36	JF	17774	A	39
MC1	15553	A	44	MBR	17780	A	39
MC1	15714	A	37	MBR	17840	S	42
JF	15915	A	31	MBR	17860	S	43
MBR	17980	A	34	MBR	19260	S	43
MBR	18000	A	35	MBR	19380	A	34
JF	18102	S	35	MBR	19460	S	38
Safety(Replaced)	18110	-	-	MBR	19540	A	42
JF	18110	A	36	MBR	19600	A	45
MBR	18140	A	38	MBR	19660	S	33
MBR	18160	A	39	JF	19694	S	35
MBR	18220	S	41	MBR	19700	S	35
MBR	18260	S	44	MBR	19800	A	40
MBR	18320	A	31	MBR	19840	S	42
MBR	18380	A	34	MBR	19860	S	43
MBR	18420	S	36	MBR	19880	S	44
MBR	18440	S	37	MBR	19980	A	34

*Section of broken Hammer Spring caused malfunction.

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MALFUNCTIONS AND FAILURES

(3) Gun Serial No. 118603

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MALFUNCTION OR FAILURE	ROUNDS FIRED	TYPE FIRE	MAG NO.	MALFUNCTION OR FAILURE	ROUNDS FIRED	TYPE FIRE	MAG NO.
MBR	18540	A	42	MBR	20000	A	35
MBR	18560	A	43	JF	20060	S	33
MBR	18600	A	45	MBR	20180	A	39
MBR	18640	S	31	MBR	20280	S	44
MBR	18680	S	34	JF	20340	A	32
MBR	18780	A	39	MBR	20380	A	34
MBR	18800	A	40	MBR	20400	A	35
MBR	18840	S	42	JF	20434	S	37
MBR	18860	S	43	MBR	20480	S	39
MBR	18920	A	31	MBR	20500	S	40
MBR	18960	A	33	MBR	20520	A	41
MBR	18980	A	34	MC1	20559	A	43
JF	18991	A	35	MBR	20580	A	44
MBR	19160	A	38	MBR	20640	S	32
MBR	20660	S	33	JF	23128	A	37
MBR	20680	S	34	JB	23144	A	38
MBR	20700	S	35	JF	23147	A	38
MBR	20720	A	36	JF	23152	A	38
JF	20832	S	42	JF	23165	A	39
MBR	20860	S	43	JF	23171	A	39
MBR	20880	S	44	JF	23181	A	40
JF	20958	A	33	JF	23182	A	40
MBR	20980	A	34	JF	23185	A	40
MBR	21000	A	35	JF	23187	A	40

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MALFUNCTIONS AND FAILURES

(3) Gun Serial No. 119603

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MALFUNCTION OR FAILURE	ROUNDS FIRED	TYPE FIRE	MAG NO.	MALFUNCTION OR FAILURE	ROUNDS FIRED	TYPE FIRE	MAG NO.
JF	21108	A	36	JF	23203	S	41
MBR	21320	A	31	JF	23207	S	41
MBR	21440	S	36	JF	23209	S	41
JF	21560	A	43	JF	23218	S	41
FF	22440	S	37	JF	23222	S	42
JF	22559	A	43	JF	23227	S	42
JF	22565	A	44	JF	23234	S	42
JF	22775	A	39	JF	23246	S	43
JF	22781	A	40	JF	23258	S	43
MC1	22879	S	44	JF	23268	S	44
JF	23005	S	31	JF	23270	S	44
JF	23008	S	31	JF	23274	S	44
JF	23009	S	31	JF	23282	S	45
JF	23013	S	31	MBR	23300	S	45
JF	23124	A	37	Ejector Spr (Replaced)	23320	A	31
JF	23126	A	37	FF	23380	A	34
JF	23127	A	37	JF	23413	S	36
FF	23440	S	37	MBR	24740	A	37
JF	23448	S	38	MC1	24978	A	34
JF	23478	S	39	(Bolt)(Replaced)	25000	-	-
JF	23593	A	45	MC1	25439	S	36
JF	23604	S	31	MC1	25479	S	39
JF	23732	A	37	MC1	25599	A	45
FF	23760	A	38	MC1	25699	S	35
JF	23798	A	40	MC1	25739	A	37

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MALFUNCTIONS AND FAILURES

(3) Gun Serial No. 118603

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MALFUNCTION OR FAILURE	ROUNDS FIRED	TYPE FIRE	MAG NO.	MALFUNCTION OR FAILURE	ROUNDS FIRED	TYPE FIRE	MAG NO.
JF	23824	S	42	MC1	25759	A	38
JF	23891	S	45	JF	25763	A	39
JF	23893	S	45	JF	25791	A	40
JF	23903	A	31	JF	25792	A	40
FF	23920	A	31	JF	25793	A	40
FF	24110	A	37	JF	25848	S	43
FF	24120	A	37	JF	25849	S	43
FF	24164	A	39	JF	25874	S	44
FF	24168	A	39	MC1	25899	S	45
FF	24174	A	39	JF	25927	A	32
FF	24180	A	39	JF	25979	A	34
FF	24184	A	40	JF	25999	A	35
FF	24194	A	40	MBR	26000	A	35
FF	24197	A	40	HLB	26219	A	36
Ejector Spring (Replaced)	24200	-	-	MBR	26239	A	37
F	24335	A	32	MBR	26259	A	38
HLB	24351	A	33	JF	26271	A	39
FF	24380	A	34	(Buffer) (Replaced)	26281	A	40
FF	24400	A	35	MBR	26340	S	43
MBR	26380	S	44	MC1	27942	A	33
MBR	26480	A	34	MC1	27944	A	33
MBR	26540	S	37	MC1	27946	A	33
JF	26684	A	44	MC1	27970	A	34

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MALFUNCTIONS AND FAILURES

APPENDIX C

(3) Gun Serial No. 118603

MALFUNCTION OR FAILURE	ROUNDS FIRED	TYPE FIRE	MAG NO.	MALFUNCTION OR FAILURE	ROUNDS FIRED	TYPE FIRE	MAG NO.
JF	26699	A	45	MC1	28190	A	39
MBR	26820	A	37	MC1	28290	S	45
JF	26883	A	40	MC1	28450	S	38
JF	26884	A	40	HLB	28998	A	35
MBR	27000	A	35	HLB	28999	A	35
JF	27014	S	41	Hammer Spring (Replaced)	29000	-	-
MC1	27080	S	34	MC1	29591	A	45
JF	27181	S	40	JF	29600	A	45
JF	27201	S	41	MBR	29760	A	38
FUR	27378	A	34	MC1	29779	A	39
JF	27407	S	36	JF	29825	S	42
JF	27436	S	37	MSB	30140	A	37
MC1	27438	S	37	MC1	30299	S	45
JF	27456	S	38	MC1	30319	A	31
JF	27518	A	41	MC1	30439	S	37
JF	27535	A	42	HLB	30511	A	41
MSB	27553	A	44	JF	30572	A	44
JF	27592	A	45	MC1	30679	S	34
MC1	27594	A	45	MBR	30700	S	35
MC1	27670	S	34	MBR	30780	A	39
MC1	27730	A	37	MBR	30860	S	43
JF	27749	A	38	JF	31124	A	37
JF	27798	A	40	JF	31138	A	37

APPENDIX G

MALFUNCTIONS AND FAILURES
(3) Gun Serial No. 118603REPORT
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MALFUNCTION OR FAILURE	ROUNDS FIRED	TYPE FIRE	MAG NO.	MALFUNCTION OR FAILURE	ROUNDS FIRED	TYPE FIRE	MAG NO.
Extractor Spring (Replaced)	31140	-	-	JF	32275	S	43
JF	31149	A	38	JF	32284	S	44
JF	31155	A	38	JF	32285	S	44
JF	31168	A	39	JF	32291	S	45
JF	31173	A	39	JF	32292	S	45
JF	31179	A	39	JF	32293	S	45
JF	31189	A	40	JF	32335	A	32
MSB	31195	A	40	JF	32336	A	32
JF	31345	A	33	JF	32357	A	33
JF	31355	A	33	JF	32358	A	33
JF	31388	A	35	JF	32394	A	35
JF	31396	A	35	JF	32395	A	35
JF	31445	A	43	JF	32396	A	35
JF	31456	A	43	JF	32479	S	38
JF	31710	A	36	JF	32519	A	41
JF	31730	A	37	FF	32560	A	43
JF	31759	A	38	FF	32600	A	45
MSB	31765	A	39	Ejector Spr. (RPL)	32600	-	-
JF	31906	A	31	FF	32740	A	37
JF	31954	A	33	JF	32884	S	44
JF	31973	A	34	JF	32885	S	44
JF	32128	A	37	FF	32892	S	45
JF	32129	A	37	JF	32893	S	45
JF	32130	A	37	FF	32894	S	45
JF	32159	A	38	JF	32895	S	45

MALFUNCTIONS AND FAILURES

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(3) Gun Serial No. 118603

APPENDIX G

MALFUNCTION OR FAILURE	ROUNDS FIRED	TYPE FIRE	MAG NO.	MALFUNCTION OR FAILURE	ROUNDS FIRED	TYPE FIRE	MAG NO.
JF	32274	S	43	HFH	33302	A	36
HFH	33307	A	36	HFH	33314	A	36
Buffer Rings (Repaired)	33320	-	-	Extractor & Spring(Replaced)	34878	-	-

MALFUNCTIONS AND FAILURES

ENG 1B
RES & ENG DIV

(4) Gun Serial No. 122033

MAL OR FAILURE	ROUNDS FIRED	TYPE FIRE	MAG NO.	MAL OR FAILURE	ROUNDS FIRED	TYPE FIRE	MAG NO.
MSB	2018	S	51	MBR	3800	A	55
JF	2379	A	54	MBR	3820	S	56
MBR	2480	S	59	MBR	3840	S	57
MBR	2500	S	60	MBR	3860	S	58
MSB	2593	A	55	MBR	3880	S	59
MBR	2640	S	57	MBR	3900	S	60
MSB	2820	S	51	GUIDE ASSN REPLACED	4000	-	-
MBR	2840	S	52	EXT SPR REPLACED	4000	-	-
MSB	2965	A	59	MBR	4020	S	46
MSB	3027	S	47	MBR	4040	S	47
MBR	3080	S	49	REPLACED	5000	-	-
MBR	3220	S	56	MBR	5020	S	51
MBR	3260	S	58	MBR	5080	S	54
MBR	3275	S	59	MBR	5120	A	56
MBR	3400	A	50	MBR	5140	A	57
MBR	3540	A	57	MBR	5160	A	58
MBR	3560	A	58	MBR	5180	A	59
MBR	3580	A	59	MBR	5260	S	48
MBR	3600	A	60	MBR	5280	S	49
MBR	3620	S	46	MBR	5300	S	50
MBR	3700	S	50	MBR	5320	A	51
MBR	3780	A	54	MBR	5340	A	52

MALFUNCTIONS AND FAILURES

ENG BR
RES & ENG DIV

(4) Gun Serial No.122033

MAL OR FAILURE	ROUNDS FIRED	TYPE FIRE	MAG NO.	MAL OR FAILURE	ROUNDS FIRED	TYPE FIRE	MAG NO.
MBR	5360	A	53	JF	6670	S	58
MBR	5380	A	54	JF	6686	S	59
MBR	5400	A	55	JF	6706	A	46
MBR	5420	S	56	JF	6884	S	55
MBR	5500	S	60	JF	7038	S	47
MBR	5520	A	46	JF	7115	A	51
MBR	5560	A	48	JF	7133	A	52
JF	5593	A	50	JF	7187	A	55
MBR	5660	S	53	JF	7293	S	60
JF	5668	S	54	JF	7303	A	46
MBR	5840	S	47	JF	7454	S	53
MBR	5860	S	48	JF	7567	A	59
MBR	5880	S	49	MBR	7620	S	46
MBR	5940	A	52	JF	7691	S	50
JF	5993	A	55	JF	7717	A	52
MBR	6140	A	47	JF	7796	A	55
MBR	6160	A	48	MBR	7980	A	50
MBR	6180	A	49	EJECTOR SPR. REPLACED	8000	-	-
JF	6191	A	50	MCI	10118	A	51
JF	6252	S	52	MCI	10199	A	55
JF	6259	S	52	MCI	10259	S	58
JF	6293	S	55	MCI	10310	A	46

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MALFUNCTIONS AND FAILURES

ENG BR
RES & ENG DIV

(4) Gun Serial No. 122033

MAL OR FAILURE	ROUNDS FIRED	TYPE FIRE	MAG NO.	MAL OR FAILURE	ROUNDS FIRED	TYPE FIRE	MAG NO.
MCI	10387	A	50	BOLT RINGS REPLACED	11291	-	-
MCI	10391	A	50	HLB	11430	S	51
MCI	10395	A	50	HAMMER SPR. REPLACED	11430	-	-
MBR	10500	S	55	JF	11719	A	51
JF	10517	A	56	MCI	12159	A	58
JF	10636	S	47	MCI	12479	S	59
JF	10716	A	51	JF	12487	S	60
JF	10726	A	52	MBR	12580	A	49
JF	10755	A	53	JF	12688	S	55
JF	10777	A	55	MCI	12759	A	58
FF	10939	A	47	MCI	12779	A	59
FF	10959	A	48	MCI	12799	A	60
HFH	11206	S	56	MBR	12940	A	52
HFH	11212	S	56	MBR	13180	A	54
HFH	11228	S	57	JF	13391	A	50
HFH	11255	S	58	FOR	13559	A	58
HFH	11263	S	59	JF	13599	A	60
HFH	11264	S	59	MCI	13859	S	58
HFH	11268	S	59	FF	13959	A	48
HFH	11282	S	60	JF	13977	A	49
HFH	11289	S	60	MCI	13999	A	50
HFH	11291	S	60	BOLT & CARRIER REPLACED	14000	-	-

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MALFUNCTIONS AND FAILURES

ENG BR
RES & ENG DIV

(4) Gun Serial No. 122033

MAL OR FAILURE	ROUNDS FIRED	TYPE FIRE	MAG NO.	MAL OR FAILURE	ROUNDS FIRED	TYPE FIRE	MAG NO.
MCI	14559	A	58	MBR	17660	S	47
MCI	14579	A	59	MBR	17680	S	48
MCI	14599	A	60	MBR	17920	A	46
JF	15341	A	47	MBR	17960	A	48
JF	15399	A	50	FF	17997	A	50
JF	15512	A	56	MBR	18160	A	53
JF	15515	A	56	MBR	18420	S	51
JF	15518	A	56	MBR	18440	S	52
JF	15525	A	57	MBR	18460	S	53
FF	15539	A	58	MBR	18580	A	59
JF	15814	S	56	FF	18648	S	48
MCI	15839	S	57	MBR	19440	S	52
MCI	15859	S	58	MBR	20400	A	50
MCI	16139	A	53	FUR	20813	S	56
MCI	16159	A	54	FUR	20855	S	58
MCI	16339	A	47	FUR	20856	S	58
MCI	16359	A	48	MCI	20859	S	59
MCI	16379	A	49	JF	20919		
MBR	16480	S	54	EXTRACTOR REPLACED	21000	-	-
MBR	17360	A	48	MBR	21980	A	49
MBR	17400	A	50	JF	22510	A	56
FF	17560	A	50	JF	22545	A	58

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MALFUNCTIONS AND FAILURES

ENG BR
RES & ENG DIV

(4) Gun Serial No. 122033

MAL OR FAILURE	ROUNDS FIRED	TYPE FIRE	MAG NO.	MAL OR FAILURE	ROUNDS FIRED	TYPE FIRE	MAG NO.
JF	22578	A	59	JF	27023	S	47
FF	23280	S	59	MBR	27120	A	51
MBR	23400	S	52	JF	27137	A	52
MBR	23440	S	52	MBR	27240	S	57
MBR	24560	A	58	EXTRACTOR REPLACED	27240	-	-
MBR	24780	A	54	FAIL TO CHAMBER	27257	S	57
MBR	24900	S	60	FAIL TO CHAMBER	27258	S	57
MBR	25280	S	59	FAIL TO CHAMBER	27259	S	57
MBR	25460	S	53	FAIL TO CHAMBER	27260	S	57
MBR	25500	S	55	JF	27281	S	60
MBR	25700	S	50	JF	27282	S	60
MBR	25940	A	47	HLB	27319	A	46
MBR	25960	A	48	JF	27350	A	48
JF	26240	A	52	LBF	27550	A	58
JF	26380	S	59	JF	27904	A	46
JF	26489	A	50	JF	28184	A	54
JF	26814	A	52	JF	28297	S	60
JF	26826	A	53	MBR	28500	A	49
JF	26855	A	54	MBR	28600	S	54
JF	26856	A	54	MBR	28700	A	60
MBR	26900	A	55	JF	28791	S	50
EXT. PIN & SPR. REPLACED	27000	-	-				

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MALFUNCTIONS AND FAILURES

**ENG BR
RES & ENG DIV**

(5) Gun Serial No. 113821

<u>MAL OR FAILURE</u>	<u>ROUNDS FIRED</u>	<u>TYPE FIRE</u>	<u>MAG NO.</u>	<u>MAL OR FAILURE</u>	<u>ROUNDS FIRED</u>	<u>TYPE FIRE</u>	<u>MAG NO.</u>
MBR	20	S	131	MBR	800	A	140
MBR	40	S	132	MBR	840	S	142
MBR	60	S	133	MBR	860	S	143
MBR	100	S	135	MBR	880	S	144
MBR	160	A	138	HLB	975	A	134
MBR	180	A	139	HLB	979	A	134
MBR	200	A	140	MBR	1100	S	140
MBR	240	S	142	MBR	1120	A	141
MBR	260	S	143	MBR	1240	S	132
MBR	280	S	144	MBR	1260	S	133
MBR	340	A	132	MBR	1300	S	135
MBR	380	A	134	MBR	1320	A	136
MBR	420	A	135	MBR	1340	A	137
MBR	460	S	138	MBR	1460	S	143
MBR	500	S	140	MBR	1480	S	144
MBR	560	A	143	MBR	1500	S	145
MBR	600	A	144	MBR	1520	A	131
MBR	620	S	145	MBR	1560	A	133
MBR	680	S	131	JF	1570	A	134
MBR	720	A	134	JF	1584	A	135
MBR	740	A	136	MBR	1600	A	135
MBR	780	A	139	MBR	1640	S	137

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MALFUNCTIONS AND FAILURES

 ENG BR
 RES & ENG DIV

(5) Gun Serial No. 113821

MAL OR FAILURE	ROUNDS FIRED	TYPE FIRE	MAG NO.	MAL OR FAILURE	ROUNDS FIRED	TYPE FIRE	MAG NO.
MBR	1680	S	139	JF	2987	A	145
MBR	1700	S	140	MBR	3000	A	145
MBR	1800	A	145	BOLT REPLACED	3000	-	-
JF	1815	S	131	MBR	3020	S	131
MBR	1820	S	131	MBR	3040	S	132
MBR	1900	S	135	MBR	3060	S	133
MBR	2080	S	144	MBR	3120	A	136
MBR	2220	S	136	MBR	3140	A	137
MBR	2260	S	138	MBR	3200	A	140
MBR	2280	S	139	JF	3232	S	142
MBR	2300	S	140	MBR	3260	S	143
MSB	2514	A	136	MBR	3260	S	143
MBR	2520	A	136	JF	3311	A	131
MSB	2523	A	137	MBR	3320	A	131
MBR	2560	S	143	MBR	3340	A	132
MBR	2660	S	143	MBR	3360	A	133
MBR	2680	S	144	MBR	3380	A	134
MBR	2740	A	131	MBR	3400	A	135
MBR	2800	A	135	MBR	3420	S	136
MBR	2840	A	135	MBR	3440	S	137
MBR	2880	S	139	MBR	3460	S	138
JF	2984	A	145	MBR	3480	S	139

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MALFUNCTIONS AND FAILURES

ENG BR
RES & ENG DIV

(5) Gun Serial No. 113821

MAL OR FAILURE	ROUNDS FIRED	TYPE FIRE	MAG NO.	MAL OR FAILURE	ROUNDS FIRED	TYPE FIRE	MAG NO.
MBR	3580	A	144	JF	4577	A	134
MBR	3600	A	145	JF	4655	S	138
MBR	3720	A	136	MBR	4660	S	138
MBR	3760	A	138	MBR	4700	S	140
MBR	3920	A	131	MBR	4740	A	142
MBR	4020	S	136	MBR	4800	A	145
MBR	4040	S	137	MBR	4820	S	131
MBR	4060	S	138	MBR	4840	S	132
MBR	4080	S	139	JF	4855	S	133
MBR	4100	S	140	MBR	4860	S	133
MBR	4140	A	142	MBR	4880	S	134
MBR	4180	A	144	MBR	4900	S	135
MBR	4200	A	145	MBR	4940	A	137
MBR	4240	S	132	MBR	4960	A	138
JF	4236	S	134	MBR	4980	A	139
JF	4356	A	138	MBR	5000	A	140
MBR	4360	A	138	MBR	5060	S	134
MBR	4360	A	138	JF	5091	S	135
MBR	4380	A	139	MBR	5180	A	139
MBR	4400	A	140	JF	5196	A	140
MBR	4460	S	143	MBR	5200	A	140
MBR	4500	S	145	MBR	5260	S	143
MBR	4560	A	133				

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MALFUNCTIONS AND FAILURES

ENG BR
RES & ENG DIV

(5) Gun Serial No. 113821

MAL OR FAILURE	ROUNDS FIRED	TYPE FIRE	MAG NO.	MAL OR FAILURE	ROUNDS FIRED	TYPE FIRE	MAG NO.
FF	5264	S	144	EJECTOR SPR. REPLACED	6000	-	-
MBR	5300	S	131	HLB	6762	A	139
MBR	5320	A	131	HLB	6763	A	139
MBR	5340	A	132	JF	7475	S	139
MBR	5360	A	133	JF	7645	S	133
MBR	5380	A	134	JF	7649	S	133
MBR	5400	A	135	FF	8180	A	139
MBR	5420	S	136	JF	8210	S	141
MBR	5480	S	139	JF	8346	A	133
MBR	5600	A	145	FF	8480	S	139
MBR	5620	S	131	FF	8640	S	132
MBR	5660	S	133	FF	8000	A	140
JF	5674	S	134	MCI	8882	A	131
MBR	5700	S	135	MCI	8885	A	131
MBR	5720	A	136	MCI	9039	S	132
MBR	5820	S	141	JF	9058	S	133
JF	5835	S	143	MCI	9179	A	139
MBR	5840	S	143	JF	9201	S	141
MBR	5920	A	131	JF	9249	S	143
MBR	5940	A	132	JF	9255	S	143
MBR	5960	A	133	EJECTOR SPR. REPLACED	9300	-	-
MBR	5980	A	134	HLB	9380	A	135

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MALFUNCTIONS AND FAILURES

ENG BR
RES & ENG DIV

(5) Gun Serial No. 113821

MAL OR FAILURE	ROUNDS FIRED	TYPE FIRE	MAG NO.	MAL OR FAILURE	ROUNDS FIRED	TYPE FIRE	MAG NO.
JF	9737	A	137	JF	10470	S	139
MCI	9779	A	139	JF	10484	S	140
BOLT KEY TIGHTENED	10200	-	-	JF	10488	S	140
BOLT RINGS REPLACED	10220	-	-	JF	10604	S	131
JF	10241	S	143	JF	10607	S	131
JF	10244	S	143	JF	10609	S	131
JF	10265	S	144	JF	10631	S	132
JF	10271	S	145	JF	10633	S	132
JF	10295	S	145	JF	10639	S	132
JF	10423		136	JF	10655	S	133
JF	10424		136	JF	10656	S	133
JF	10428		136	JF	10664	S	134
JF	10433		137	JF	10668	S	134
JF	10434	S	137	JF	10688	S	134
JF	10435	S	137	JF	10689	S	135
JF	10436	S	137	MBR	10720	A	136
JF	10443	S	138	MCI	10735	A	136
JF	10446	S	138	JF	10738	A	137
JF	10447	S	138	MBR	10760	A	137
JF	10448	S	138	JF	10766	A	138
JF	10463	S	139	JF	10772	A	139
JF	10468	S	139	MBR	10780	A	139

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MALFUNCTIONS AND FAILURES

**ENG BR
 RES & ENG DIV**

(5) Gun Serial No. 113821

MAL OR FAILURE	ROUNDS FIRED	TYPE FIRE	MAG NO.	MAL OR FAILURE	ROUNDS FIRED	TYPE FIRE	MAG NO.
MCI	10789	A	140	JF	11394	A	135
JF	10793	A	140	JF	11395	A	135
JF	10818	S	141	JF	11457	S	138
JF	10835	S	142	JF	11497	S	140
JF	10850	S	143	JF	11498	S	140
JF	10876	S	144	JF	11558	A	142
JF	10895	S	145	JF	11559	A	142
JF	10918	A	131	JF	11572	A	143
JF	10928	A	132	JF	11573	A	143
JF	10956	A	133	JF	11574	A	143
JF	10968	A	134	JF	11575	A	143
JF*	10990	A	135	JF	11586	A	144
JF	11074	S	135	JF	11622	S	131
JF	11118	A	136	JF	11623	S	131
JF	11122	A	137	JF	11631	S	133
JF	11123	A	137	JF	11632	S	133
JF	11200	A	140	JF	11633	S	133
JF	11218	S	141	JF	11645	S	134
FF	11277	S	144	JF	11680	S	135
FF	11378	A	133	JF	11681	S	135
JF	11387	A	139	JF	11682	S	135
JF	11388	A	139	JF	11757	A	138

* Receiver Modified 11,000

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MALFUNCTIONS AND FAILURES

ENG BR
RES & ENG DIV

(5) Gun Serial No. 113821

MAL OR FAILURE	ROUNDS FIRED	TYPE FIRE	MAG NO.	MAL OR FAILURE	ROUNDS FIRED	TYPE FIRE	MAG NO.
JF	11780	A	139	MBR	14000	-	-
JF	11781	A	139	FF	14482	S	140
JF	11782	A	139	FF	14822	S	142
JF	11783	A	139	MBR	14822	S	142
JF	11791	A	140	(42)		-	-
JF	11792	A	140	MBR	15000	-	-
JF	11793	A	140	(44)		-	-
JF	11809	A	140	MBR	16000	-	-
JF	11873	S	142	FF	16221	S	142
JF	11874	S	144	FF	16262	S	144
JF	11875	S	144	FF	16661	S	134
MBR	11900	S	145	HLB	16710	A	136
MBR	11940	A	132	HLB	16728	A	137
MBR	11960	A	133	HLB	16748	A	138
MBR	11980	A	134	HLB	16772	A	139
MBR	12000	A	135	MBR	16000	-	-
FF	12180	A	139	(35)		-	-
FF	12477	S	139	MBR	17000	-	-
MBR	12000	-	-	HLB	17241	S	142
(39)		-	-	HAMMER SPR. REPLACED	17241	-	-
MBR	13000	-	-	FF	17262	S	144
(40)		-	-	BOLT REPLACED	17637	-	-

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MALFUNCTIONS AND FAILURES

ENG BR
RES & ENG DIV

(5) Gun Serial No. 113821

MAL OR FAILURE	ROUNDS FIRED	TYPE FIRE	MAG NO.	MAL OR FAILURE	ROUNDS FIRED	TYPE FIRE	MAG NO.
MBR	17000	-	-	FF	19572	A	144
(36)		-	-	FF	19576	A	144
MBR	18000	-	-	REPT. & EXT. SPR. REPLACED	19780	-	-
MCI	18539	A	132	MCI	19821	S	142
MCI	18555	A	133	MCI	19822	S	142
MCI	18732	A	142	HLB	19912	A	131
MCI	18732	A	142	HLB	19930	A	132
MCI	18903	A	136	HLB	19945	A	133
MCI	18909	A	136	MCI	19948	A	133
MCI	18915	A	136	MBR	19000	-	-
MBR	18000	-	-	(6)		-	-
(22)		-	-	MBR	20,000	-	-
MBR	19000	-	-	JF	20130	A	137
FF	19151	A	137	MCI	20150	A	138
FF	19165	A	139	MCI	20155	A	138
FF	19171	A	139	MCI	20158	A	138
FF	19180	A	139	MBR	20,000	-	-
FF	19184	A	140	(26)		-	-
FF	19340	A	132	MBR	21000	-	-
FF	19393	A	135	(29)		-	-
FF	19467	S	139	MBR	22000	-	-
FF	19484	S	139	MCI	22180	A	139
FF	19568	A	144				

MALFUNCTIONS AND FAILURES

ENG BR
RES & ENG

(5) Gun Serial No. 113821

MAL OR FAILURE	ROUNDS FIRED	TYPE FIRE	MAG NO.	MAL OR FAILURE	ROUNDS FIRED	TYPE FIRE	MAG NO.
FF	22515	A	141	FF	25343	A	133
MCI	22599	A	145	FF	25920	A	131
FF	22680	S	134	FF	25940	A	132
MCI	22739	A	137	MBR	25000	-	-
FF	22750	A	138	(27)		-	-
MCI	22759	A	138	MBR	26000	-	-
MBR	22000	-	-	HAMMER SPR. REPLACED	26082	-	-
(8)		-	-	MCI	26355	A	138
MBR	23000	-	-	MM	26400	S	136
MCI	23199	A	140	MM	26420	S	138
MCI	23319	A	131	MM	26421	S	139
MCI	23339	A	132	MCI	26539	A	132
MCI	23399	A	135	EXT. SPR. REPLACED	26583	-	-
MBR	23000	-	-	MCI	26725	A	141
(6)		-	-	HLB	26936	A	137
MBR	24000	-	-	HLB	26955	A	138
HLB	24552	A	143	HLB	26977	A	139
MBR	24000	-	-	HLB	26990	A	140
(15)		-	-	MBR	26000	-	-
MBR	25000	-	-	(18)		-	-
FF	25180	A	139	MBR	27000	-	-
FF	25263	S	144	FF	2787	S	139

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MALFUNCTIONS AND FAILURES

ENG BR
RES & ENG DIV

(5) Gun Serial No. 113821

MAL OR FAILURE	ROUNDS FIRED	TYPE FIRE	MAG NO.	MAL OR FAILURE	ROUNDS FIRED	TYPE FIRE	MAG NO.
FDF	27343	A	138	BR	29000	-	-
MCI	27362	A	139	MCI	29139	A	141
MCI	27364	A	139	MCI	29339	A	137
MCI	27366	A	139	BOLT RINGS REPLACED	29400	-	-
BOLT REPLACED	27400	-	-	MCI	29519	A	131
MCI	27439	A	132	JF	29525	A	132
FF	27794	A	145	MCI	29529	A	134
HFH	27925	A	136	MCI	29579	A	134
FDF	27975	A	138	MCI	29599	A	135
MBR	27000	-	-	MCI	29715	A	141
(12)		-	-	MCI	29719	A	141
MBR	28000	-	-	JF	29752	A	143
MCI	28359	A	137	JF	29754	A	143
MCI	28376	A	139	JF	29756	A	143
MCI	28539	A	132	JF	29770	A	144
FUR	28660	S	138	JF	29772	A	144
MCI	28739	A	142	JF	29776	A	144
MCI	28773	A	144	JF	29782	A	145
MCI	28919	A	136	MCI	29936	A	137
MCI	28999	A	140	MBR	29000	-	-
MBR	28000	-	-	(12)		-	-
(18)		-	-	MBR		-	-

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MALFUNCTIONS AND FAILURES

ENG BR
RES & ENG DIV

(5) Gun Serial No. 113821

MAL OR FAILURE	ROUNDS FIRED	TYPE FIRE	MAG NO.	MAL OR FAILURE	ROUNDS FIRED	TYPE FIRE	MAG NO.
JF	30118	A	136	MCI	30799	A	140
MCI	30179	A	139	TRIGGERPIN REPLACED	30820	-	-
MCI	30399	A	135	MCI	30939	A	132
MCI	30399	A	135	MCI	30959	A	133
JF	30466	S	139	MBR	30,000	-	-
MCI	30516	A	141	(18)		-	-
MCI	30525	A	142	MBR	31000	-	-
JF	30549	A	143	JF	31110	A	136
MCI	30576	A	144	JF	31170	A	138
MCI	30598	A	145	FF	31265	S	143
MCI	30719	A	136	FF	31272	S	144
MCI	30722	A	137	JF	31828	S	141
MCI	30725	A	137	JF	31864	S	143
MCI	30730	A	137	JF	31685	S	134
MCI	30750	A	138	MBR	31000	-	-
MCI	30759	A	138	(29)		-	-
MCI	30765	A	139	MBR	32000	-	-
MCI	30770	A	139	JF	32159	A	137
MCI	30779	A	139	JF	32385	A	135
MCI	30785	A	140	DISCONNECT REPLACED	32404	-	-
MCI	30789	A	140	MCI	32519	A	141
MCI	30792	A	140	FF	32565	A	144
MCI	30795	A	140	MBR	32000	-	-

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MALFUNCTIONS AND FAILURES

ENG BR
RES & ENG

(5) Gun Serial No. 113821

MAL OR FAILURE	ROUNDS FIRED	TYPE FIRE	MAG NO.	MAL OR FAILURE	ROUNDS FIRED	TYPE FIRE	MAG NO.
(23)		-	-				
MBR	33000	-	-				
FF	33223	S	142				
JF	33295	S	145				
JF	33450	S	138				
JF	33452	S	138				
JF	33478	S	139				
JF	33500	S	140				
EJECTOR SPR. REPLACED	33500	S	140				
FF	33682	S	135				
MBR	33000	-	-				
(29)		-	-				
MBR	34000	-	-				
MBR	34119	A	136				
MBR	34545	A	144				

MALFUNCTIONS AND FAILURES

ENG BR
RES & ENG DIV

(6) Gun Serial No. 122994

MAL OR FAILURE	ROUNDS FIRED	TYPE FIRE	MAG NO.	MAL OR FAILURE	ROUNDS FIRED	TYPE FIRE	MAG NO.
MBR	100	S	150	MBR	1160	A	158
MBR	160	A	153	JF	1274	S	149
MBR	280	S	155	MBR	1440	S	157
JF	355	A	148	JF	1454	S	158
MBR	420	S	151	JF	1465	S	159
JF	456	S	156	MBR	1480	S	159
MBR	480	S	154	JF	1490	S	160
MBR	500	S	155	JF	1491	S	160
MBR	580	A	158	JF	1492	S	160
JF	635	S	147	JF	1493	S	160
JF	657	S	148	MBR	1500	S	160
JF	663	S	149	JF	1512	A	146
MBR	740	A	152	HFH	1525	A	147
JF	752	A	153	JF	1567	A	149
JF	793	A	154	MBR	1600	A	150
JF	911	A	146	JF	1658	S	153
JF	1038	S	152	JF	1659	S	153
JF	1054	S	153	JF	1678	S	154
MBR	1060	S	153	MBR	1720	A	156
JF	1091	S	155	JF	1735	A	157
JF	1092	S	155	JF	1736	A	157
MBR	1100	S	155	JF	1817	A	160

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MALFUNCTIONS AND FAILURES

ENG BR
RES & ENG DIV

(6) Gun Serial No. 122994

MAL OR FAILURE	ROUNDS FIRED	TYPE FIRE	MAG NO.	MAL OR FAILURE	ROUNDS FIRED	TYPE FIRE	MAG NO.
HFH	1818	A	160	JF	2709	A	1511
MBR	1860	S	148	JF	2719	A	151
JF	1874	S	149	JF	2736	A	152
EJC SPR	2000	-	-	JF	2752	A	153
RPL							
MBR	2020	S	146	JF	2754	A	153
MBR	2140	A	153	JF	2755	A	153
MBR	2180	A	154	MBR	2860	S	159
MBR	2200	A	155	MBR	2880	S	160
JF	2304	S	160	JF	2977	A	148
JF	2345	A	148	JF	2994	A	149
JF	2350	A	148	JF	2997	A	149
JF	2504	A	156	JF	2999	A	149
JF	2506	A	156	HLB	3036	S	147
JF	2510	A	156	MBR	3000	-	-
JF	2560	A	158	(40)		-	-
JF	2604	S	146	MBR	6000	-	-
JF	2606	S	146	JF	4391	A	155
JF	2608	S	146	JF	4620	S	151
JF	2619	S	146	JF	4707	A	156
JF	2664	S	149	JF	4892	S	150
JF	2668	S	149	JF	4908	A	151
JF	2677	S	149	JF	4915	A	151

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MALFUNCTIONS AND FAILURES

(6) Gun Serial No. 122994

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ENG BR
RES & ENG DIV

MAL OR FAILURE	ROUNDS FIRED	TYPE FIRE	MAG NO.	MAL OR FAILURE	ROUNDS FIRED	TYPE FIRE	MAG NO.
JF	5030	S	147	JF	9230	S	157
JF	5032	S	147	MCI	9255	S	158
JF	5034	S	147	MCI	9455	S	153
JF	5070	S	149	MBR	9460	S	153
JF	5196	A	155	EXT RPL	9491	-	-
JF	5858	S	158	MCI	9575	A	159
BLT RPL	6000	-	-	JF	9656	S	148
MBR	6040	S	146	JF	9678	S	149
MBR	6060	S	148	JF	9714	A	151
MBR	6080	S	149	MCI	9775	A	154
MBR	6100	S	150	JF	9872	S	159
MBR	6600	A	160	JF	9879	S	159
JF	7569	A	159	MBR	9920	A	146
MBR	7660	S	148	JF	9935	A	147
MCI	8223	S	157	JF	9972	A	149
MCI	8455	S	152	JF	10128	A	152
MCI	8735	A	152	JF	10169	A	156
FF	8844	S	158	MCI	10165	A	154
FF	8865	S	159	MCI	10275	S	159
JF	9130	A	152	MCI	10435	S	152
JF	9187	A	155	JF	10530	A	157
JF	9198	A	155	JF	10558	A	158

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MALFUNCTIONS AND FAILURES

ENG BR
RES & ENG DIV

(6) Gun Serial No. 122994

MAL OR FAILURE	ROUNDS FIRED	TYPE FIRE	MAG NO.	MAL OR FAILURE	ROUNDS FIRED	TYPE FIRE	MAG NO.
JF	10563	A	159	JF	11083	S	150
JF	10566	A	159	MBR	11100	S	150
MCI	10615	S	146	JF	11117	A	151
MCI	10715	A	151	JF	11118	A	151
JF	10760	A	153	JF	11138	A	153
JF	10780	A	154	JF	11139	A	153
FF	10840	S	157	JF	11147	A	154
FF	10860	S	158	JF	11200	S	156
MCI	10875	S	159	JF	11201	S	156
FF	10890	S	160	JF	11202	S	156
FF	10915	A	146	JF	11277	S	159
JF	10940	A	147	JF	11278	S	159
JF	10960	A	148	JF	11315	A	146
JF	10980	A	149	JF	11335	A	148
JF	11000	A	150	MBR	11420	S	151
RCVR MOD	11000	-	-	JF	11516	A	156
JF	11017	S	146	JF	11523	A	156
JF	11034	S	147	JF	11523	A	157
JF	11047	S	148	JF	11655	-	-
JF	11048	S	148	33	-	-	-
JF	11049	S	148	JF	12097	-	-
JF	11068	S	149	BUFF RPL	12097	-	-

MALFUNCTIONS AND FAILURES

ENG BR
RES & ENG DIV

(6) Gun Serial No. 122994

MAL OR FAILURE	ROUNDS FIRED	TYPE FIRE	MAG NO.	MAL OR FAILURE	ROUNDS FIRED	TYPE FIRE	MAG NO.
JF	12436	S	152	FF	19149	A	153
LBF	12756	A	153	HLB	19172	A	154
HFH	13274	S	160	FF	19187	A	155
HFH	13275	S	160	FF	19193	A	155
JF	13551	A	157	BUFF RPL	19200	-	-
MBR	13760	A	153	HLB	19246	S	158
JF	13881	S	160	HLB	19251	S	158
MBR	14000	A	147	HLB	19257	S	158
HFH	13961	A	149	HLB	19278	S	159
MBR	14000	A	150	HLB	19290	S	160
EXTR RPL	14261	-	-	HAM SPR RPL	19290	-	-
MBR	16520	A	156	XF	19879	S	159
BLT RPL	16595	-	-	XF	19987	A	150
MBR	17440	S	152	EXTR RPL	19987	-	-
MBR	17460	S	153	FF	21706	A	152
MBR	17500	S	155	XF	21802	S	156
JF	18095	S	155	XF	21804	S	156
JF	18195	A	160	EXTR SPR RPL	21820	-	-
HFH	18330	A	152	FF	21856	S	158
JF	18371	A	154	FF	21878	S	159
JF	18757	A	158	FF	21911	A	146
JF	18889	S	150	FF	21930	A	147

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MALFUNCTIONS AND FAILURES

ENG BR
RES & ENG DIV

(6) Gun Serial No. 122994

MAL OR FAILURE	ROUNDS FIRED	TYPE FIRE	MAG NO.	MAL OR FAILURE	ROUNDS FIRED	TYPE FIRE	MAG NO.
FF	21947	A	148	JF	24380	A	149
FF	21958	A	148	JF	24632	S	147
FF	21973	A	149	JF	24644	S	148
FF	21988	A	150	EXTR RPL	24740	-	-
MBR	22000	A	150	JF	25336	A	147
JF	22145	A	153	JF	25342	A	148
JF	22150	A	153	MBR	25500	S	155
JF	22160	A	153	JF	25710	A	151
JF	22217	S	156	JF	25833	S	157
JF	22226	S	157	JF	25896	S	160
JF	22365	A	149	JF	25904	A	146
JF	22474	S	154	JF	25915	A	146
JF	22752	A	153	MBR	25920	A	146
JF	23755	A	153	JF	28536	A	157
JF	23951	A	148	JF	28954	A	148
JF	24001	S	146	JF	29032	S	147
JF	24013	S	147	JF	29044	S	148
JF	24015	S	148	JF	29072	S	149
JF	24017	S	149	MBR	29140	A	152
JF	24100	S	150	JF	29160	A	153
MSB	24220	S	156	JF	29180	A	154
JF	24221	S	157	JF	29200	A	155

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MALFUNCTIONS AND FAILURES

ENG BR
RES & ENG DIV

(6) Gun Serial No. 122994

MAL OR FAILURE	ROUNDS FIRED	TYPE FIRE	MAG NO.	MAL OR FAILURE	ROUNDS FIRED	TYPE FIRE	MAG NO.
MBR	29240	S	157				
JF	29334	A	147				
MBR	29340	A	146				
JF	29452	S	153				
JF	29730	S	148				
JF	29820	S	156				
BLT RPL	30000	-	-				

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MALFUNCTIONS AND FAILURES

ENG BR
RES & ENG DIV

(7) Gun Serial No. 121654

MALFUNCTION OR FAILURE	ROUNDS FIRED	TYPE FIRE	MAG NO.	MALFUNCTION OR FAILURE	ROUNDS FIRED	TYPE FIRE	MAG NO.
JF	202	S	71	JF	2445	S	302
"	228	S	72	MBR	2000	-	-
"	445	S	68	(9)		-	-
"	541	A	78	MBR	3000	-	-
MBR		-	-	JF	3078	S	323
(9)		-	-	JF	3135	A	302
MBR	1000	-	-	JF	3239	S	303
MSB	1150	A	162	"	3375	A	323
JF	1204	S	303	"	3655	S	161
"	1324	A	301	"	3660	S	161
"	1458	S	324	"	3679	S	161
"	1506	A	303	"	3680	S	161
"	1600	A	163	"	3743	A	162
"	1676	S	323	"	3965	A	323
"	1880	S	313	BOLT REPLACED	4000	-	-
"	1945	A	301	MBR	3000	-	-
"	1990	A	161	(12)		-	-
EJECTOR SPR. REPLACED	2000	-	-	MBR	4000	-	-
MBR	1000	-	-	JF	4000	-	-
(11)		-	-	(63)		-	-
MBR	2000	-	-	JF	5140	-	-

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MALFUNCTION OR FAILURE	ROUNDS FIRED	TYPE FIRE	MAG NO.	MALFUNCTION OR FAILURE	ROUNDS FIRED	TYPE FIRE	MAG NO.
EJECTOR	5140	-	-	JF	7995	A	161
SPR. REP.							
GUIDE ASSY	5000	-	-	MBR	7998	A	161
REPLACED							
MBR	4000	-	-	MBR	8085	S	161
(9)		-	-	BOLT	9000	-	-
				REPLACED			
MBR	5180	-	-	MBR	9145	A	162
JF	6191	A	162	"	9188	A	162
MBR	6285	A	162	"	9348	A	161
JF	6270	S	325	"	9365	A	313
"	6340	A	301	"	9388	A	161
"	6493	S	162	"	9786	A	162
MBR	6745	A	162	JF	9840	S	163
MBR	6855	S	163	MBR	9955	A	161
MBR	6952	A	301	"	10255	S	163
"	7142	A	162	JF	10393	A	323
"	7185	A	162	"	10396	A	161
JF	7272	S	325	"	10427	S	302
JF	7329	A	301	JF	10442	S	162
MBR	7395	A	161	JF	10462	S	324
MBR	7485	S	162	MBR	10748	A	162
MBR	7595	A	163	JF	10797	A	162
JF	7727	A	302	HLB	11083	S	161
JF	7734	A	162	HLB	11084	S	161
MBR	7738	A	162	HAMMER	11166	-	-
				SPR. REPL.			

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MALFUNCTION OR FAILURE	ROUNDS FIRED	TYPE FIRE	MAG NO.	MALFUNCTION OR FAILURE	ROUNDS FIRED	TYPE FIRE	MAG NO.
JF	11166	A	324	"	11968	A	161
MBR	11166	A	324	"	12181	A	162
JF	11187	A	162	"	12353	A	323
HLB	11210	S	303	"	12382	A	161
"	11211	S	303	"	12388	A	161
"	11223	S	303	"	12392	A	161
"	11234	S	163	"	12398	A	161
"	11236	S	163	"	12703	A	163
"	11241	S	163	HLB	12931	A	161
"	11252	S	313	BOLT REPLACED	12976	-	-
"	11256	S	313	JF	13175	A	324
"	11263	S	313	GUIDE ASSY REPLACED	13180	-	-
"	11265	S	313	JF	13846	S	163
JF	11297	A	161	HLB	14176	A	324
MBR	11555	A	313	"	14377	A	323
JF	11692	S	161	"	14547	A	163
"	11812	S	303	MBR	14550	A	163
"	11819	S	303	"	14785	A	162
"	11841	S	163	"	14995	A	161
"	11874	S	313	"	15187	A	162
JF	11928	A	161	EXTRACTOR SPR. REPLACED	15844	-	-
"	11940	A	323	MBR	15875	S	313
"	11963	A	161	MBR	15995	A	161

MALFUNCTION OR FAILURE	ROUNDS FIRED	TYPE FIRE	MAG NO.	MALFUNCTION OR FAILURE	ROUNDS FIRED	TYPE FIRE	MAG NO.
JF	16240	S	163	"	19295	S	163
MBR	16335	A	301	"	19325	A	301
JF	16347	A	161	JF	19662	S	324
DISCONNECT REPLACED	16485	-	-	JF	19845	S	163
TRIGGER PIN REPLACED	16485	-	-	JF	19881	S	163
MBR	16945	A	161	MBR	19890	S	163
HLB	16958	A	323	"	19945	A	161
JF	17297	S	163	JF	19975	A	323
JF	17547	A	163	MBR	19995	A	161
MBR	17595	A	163	"	20185	A	162
HLB	17941	A	301	JF	20285	S	163
"	17943	A	301	"	20341	A	161
"	17945	A	301	"	20343	A	161
"	17995	A	161	"	20344	A	161
JF	18004	S	301	"	20481	S	162
"	18140	A	162	"	20519	A	303
MBR	18190	A	162	"	20523	A	303
FF	18283	S	163	"	20529	A	303
FF	18347	A	161	"	20560	A	313
MBR	18585	A	163	"	20565	A	313
"	18748	A	162	"	20570	A	313
"	18992	A	162	"	20584	A	163
"	19186	A	162	"	20590	A	163

APPENDIX C

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<u>MALFUNCTION</u> <u>OR</u> <u>FAILURE</u>	<u>ROUNDS</u> <u>FIRE</u>	<u>TYPE</u> <u>FIRE</u>	<u>MAG</u> <u>NO.</u>	<u>MALFUNCTION</u> <u>OR</u> <u>FAILURE</u>	<u>ROUNDS</u> <u>FIRE</u>	<u>TYPE</u> <u>FIRE</u>	<u>MAG</u> <u>NO.</u>
"	20596	A	163				
EJECTOR SPR.	20596	-	-				
REPLACED							
MBR	21246	S	163				
"	21400	A	161				
"	21500	S	161				
"	21700	A	161				
"	21760	A	162				
EXTRACTOR SPRING	21835	-	-				
REPLACED							
JF	21865	S	313				
JF	21945	A	161				
"	21962	A	323				
"	21978	A	323				

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MALFUNCTIONS AND FAILURES

Eng Br
Res & Eng Div

(8) Gun Serial No. 121185

MAL OR FAILURE	ROUNDS FIRED	TYPE FIRE	MAG NO.	MAL OR FAILURE	ROUNDS FIRED	TYPE FIRE	MAG NO.
HL3	180	A	84	JF	2240	S	166
FF	289	S	90	JF	2250	S	164
JF	587	A	90	JF	2670	S	316
JF	720	A	81	JF	2790	A	314
MBR	C	-	-	MBR	2000	-	-
(15)		-	-	(17)		-	-
MBR	1000	-	-	MBR	3000	-	-
JF	1330	A	304	BOLT REPLACED	3000	-	-
JF	1364	A	314	MBR	3000	-	-
JF	1470	S	315	(18)		-	-
JF	1490	S	165	MBR	4000	-	-
JF	1692	S	164	(20)		-	-
JF	1744	A	165	MBR	5000	-	-
JF	1775	A	315	GUIDE ASSN. REPLACED	5000	-	-
JF	1849	S	166	MBR	5160	A	65
JF	1865	S	316	MBR	5200	A	165
JF	1950	A	304	XF	6296	S	166
JF	1995	A	164	XF	6324	A	304
MBR	1000	-	-	XF	6525	A	306
(9)		-	-	EXTRACTOR REPLACED	6527	-	-
MBR	2000	-	-	XF	6531	A	66
EJECTOR SPRING REPLACED	2000	-	-	XF	6599	A	166

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MALFUNCTIONS AND FAILURES

Eng Br
Res & Eng Div

(8) Gun Serial No. 121185

MAL OR FAILURE	ROUNDS FIRED	TYPE FIRE	MAG NO.	MAL OR FAILURE	ROUNDS FIRED	TYPE FIRE	MAG NO.
XF	6694	S	164	HLB	10483	S	165
JF	6775	A	315	HLB	10487	S	165
JF	6797	A	165	HAMMER SPRING REPLACED	10487	-	-
FF	6976	A	64	JF	10800	A	165
XF	6991	A	314	MBR	10000	-	-
MBR	6000	-	-	(11)		-	-
(8)		-	-	MBR	11,000	-	-
MBR	7000	-	-	EXTRACTOR SPR. REPLACED	11,000	-	-
BOLT REPLACED	7481	-	-	JF	11244	S	66
XF	7397	A	164	JF	11910	A	304
MBR	7000	-	-	MBR	11000	-	-
(11)		-	-	(10)		-	-
MBR	8000	-	-	MBR	12000	-	-
(17)		-	-	JF	12018	S	304
MBR	9000	-	-	JF	12141	A	65
(10)		-	-	JF	12209	S	306
MBR	1000	-	-	JF	12248	S	66
JF	10177	A	315	JF	12259	S	316
HLB	10431	S	65	JF	12283	S	166
HLB	10433	S	65	JF	12287	S	166
HLB	10455	S	315	JF	12325	A	304
HLB	10458	S	315	HLB	12344	A	64

MALFUNCTIONS AND FAILURES

ENG BR
RES & ENG DIV

(8) Gun Serial No. 121185

MAL OR FAILURE	ROUNDS FIRED	TYPE FIRE	MAG NO.	MAL OR FAILURE	ROUNDS FIRED	TYPE FIRE	MAG NO.
JF	12376	A	314	HBL	14720	A	305
MCI	12390	A		MBR	14800	A	165
MCI	12391	A	164	MBR	14860	S	66
EJECTOR SPR. REPLACED	12400	-	-	MBR	15000	A	164
MBR	12520	A	165	MBR	15200	A	165
MCI	12545	A	66	JF	15435	S	65
JF	12598	A	166	JF	15546	A	66
FF	12798	A	315	MCI	15788	A	165
HLB	12790	A	165	HLB	15996	A	164
JF	13175	A	165	MBR	16200	A	165
JF	13282	S	166	MBR	16260	S	66
JF	13298	S	166	MBR	16400	A	164
JF	13334	A	64	MCI	16745	A	305
JF	13347	A	64	JF	16977	A	314
JF	13352	A	314	MBR	17140	A	305
JF	13357	A	314	MBR	17160	A	65
JF	13359	A	314	JF	17226	S	306
MSB	13365	A	364	MCI	17335	A	304
EJECTOR SPR. REPLACED	13400	-	-	JF	17540	A	66
MBR	14300	S	166	JF	17546	A	66
MBR	14400	A	164	JF	17590	A	166
MBR	14600	A	166	MBR	17640	S	304

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MALFUNCTION AND FAILURES

ENG BR
RES & ENG DIV

(8) Gun Serial No. 121185

MAL OR FAILURE	ROUNDS FIRED	TYPE FIRE	MAG NO.	MAL OR FAILURE	ROUNDS FIRED	TYPE FIRE	MAG NO.
JF	17710	A	305	JF	19165	A	315
JF	17712	A	305	JF	19189	A	165
JF	17745	A	65	JF	19260	S	316
JF	17748	A	65	JF	19285	S	166
JF	17751	A	65	JF	19351	A	304
MSB	17762	A	315	JF	19384	A	164
MSB	17768	A	315	JF	19385	A	164
JF	17792	A	304	JF	19386	A	164
CAM PIN REPLACED	18000	-	-	EJECTRO SPR. REPLACED	19386	-	-
JF	18132	A	65	JF	19465	S	315
JF	18136	A	65	JF	19751	A	315
JF	18144	A	65	JF	19862	S	316
JF	18153	A	315	JF	19975	A	314
JF	18348	A	64	JF	20397	A	164
JF	18396	A	164	JF	20561	A	316
JF	18398	A	164	JF	20672	S	314
MBR	18480	S	315	JF	20675	S	314
JF	18595	A	166	JF	20678	S	314
JF	18676	S	164	JF	20686	S	164
JF	18797	S	166	HLB	20742	A	65
HLB	18941	A	304	HLB	20745'	A	65
FF	19120	A	305	HLB	20750	A	65

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MALFUNCTIONS AND FAILURES

ENG BR
RES & ENG DIV

(8) Gun Serial No. 112185

<u>MAL OR FAILURE</u>	<u>ROUNDS FIRED</u>	<u>TYPE FIRE</u>	<u>MAG NO.</u>
HLB	20752	A	65
HLB	20756	A	65
HLB	20758	A	65
HLB	20759	A	65
HAMMER SPRING REPLACED	20980	-	-
DSICONNECT REPLACED	20980	-	-
TRIGGER PIN REPLACED	20980	-	-

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MALFUNCTIONS AND FAILURES

ENG BR
RES & ENG DIV

(9) Gun Serial No. 109068

MAL OR FAILURE	ROUNDS FIRED	TYPE FIRE	MAG NO.	MAL OR FAILURE	ROUNDS FIRED	TYPE FIRE	MAG NO.
FF	135	A	107	"	3406	S	106
MBR	150	A	108	"	3418	S	106
JF	675	S	104	"	3435	S	107
"	676	S	104	"	3440	S	107
MSB	1540	A	102	MSB	3620	S	101
"	1620	S	106	FF	3920	A	101
MBR	1640	S	107	JF	3979	A	104
"	1820	S	101	"	3980	A	104
MSB	1820	S	101	"	4946	A	103
MBR	1940	A	107	FF	5160	A	108
MSB	2020	S	111	JF	5420	S	106
"	2040	S	112	FF	5540	A	112
"	2140	A	102	JF	6145	A	110
"	2380	A	114	MBR	6300	S	115
JF	2425	S	102	MCI	6339	A	102
"	2499	S	105	JF	6728	A	107
MSB	2520	A	106	"	6737	A	107
HLB	2561	A	109	"	6755	A	108
"	2782	A	105	"	6790	A	110
MSB	2940	A	112	MBR	6790	A	110
JF	3078	S	104	JF	6806	S	111
"	3190	A	110	"	6822	S	112

MALFUNCTIONS AND FAILURES

ENG BR
RES & ENG DIV

(9) Gun Serial No. 109068

MAL OR FAILURE	ROUNDS FIRED	TYPE FIRE	MAG NO.	MAL OR FAILURE	ROUNDS FIRED	TYPE FIRE	MAG NO.
"	6838	S	112	FDF	8784	A	115
"	6850	S	113	JF	8813	S	101
"	6860	S	113	"	8822	S	102
"	6916	S	115	"	9002	A	105
"	6968	-	-	FDF	9005	A	106
EJC SPR	6968	-	-	FDF	9005	A	106
RPL	7015	S	101	MBR	9000	-	-
HLB	7015	S	101	MBR	9000	-	-
"	7043	S	103	(16)		-	-
"	7045	S	103	MBR	1000	-	-
"	7058	S	103	MCI	9008	A	106
"	7058	S	103	MCI	9010	A	106
JF	8101	A	111	MCI	9015	A	106
JF	8106	A	111	MCI	9015	A	106
"	8140	A	112	JF	9005	S	101
"	8160	A	113	MBR	9040	S	102
"	8238	S	102	MBR	9140	A	107
"	8275	S	104	JF	9140	A	107
"	8281	S	105	JF	9154	A	108
"	8456	S	113	"	9187	A	110
"	8464	S	114	"	9189	S	114
"	8483	S	115	"	9215	A	102
"	8483	S	115	"	9215	A	102
FDF	8603	S	106	MBR	9440	S	107
JF	8634	S	107	"	9500	S	110
FF	8701	A	111	MCI	9562	A	114

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MALFUNCTIONS AND FAILURES

ENG BR
RES & ENG DIV

(9) Gun Serial No. 109068

MAL OR FAILURE	ROUNDS FIRED	TYPE FIRE	MAG NO.	MAL OR FAILURE	ROUNDS FIRED	TYPE FIRE	MAG NO.
"	9565	A	114	"	10112	A	107
"	9568	A	114	"	10130	A	108
"	9575	A	114	HLB	10178	A	109
"	9578	A	114	JF	10208	S	111
MBR	9620	S	101	"	10268	S	114
"	9622	S	102	FF	10298	S	115
JF	9622	S	102	MCI	10321	A	102
MBR	9660	S	101	"	10325	A	102
"	9740	A	107	"	10330	A	102
"	9840	S	112	"	10335	A	102
"	9860	S	113	"	10337	A	102
"	9880	S	114	"	10339	A	102
HLB	9935	A	101	JF	10512	A	111
"	9938	A	101	FF	10522	A	112
MBR	9940	A	102	JF	10569	A	114
"	9960	A	103	FOR	10584	A	115
JF	9979	A	104	"	10589	A	115
"	9980	A	104	"	10597	A	115
"	10012	S	102	JF	10665	A	104
"	10049	S	103	"	10708	A	106
JF	10075	S	101	"	10723	A	106
"	10077	S	101	"	10733	A	106

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MALFUNCTIONS AND FAILURES

(9) Gun Serial No. 109068

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ENG BR
RES & ENG DIV

MAL OR FAILURE	ROUNDS FIRED	TYPE FIRE	MAG NO.	MAL OR FAILURE	ROUNDS FIRED	TYPE FIRE	MAG NO.
"	10744	A	108	RCVR MOD	11000	-	-
"	10749	A	108	MBR	11140	A	107
"	10770	A	109	FF	11281	S	115
"	10789	A	110	FF	11287	S	115
JF	10804	S	111	HFH	11673	S	104
"	10816	S	111	DCNT RPL	11686	-	-
"	10819	S	111	FF	11897	S	115
"	10824	S	112	JF	11000	-	-
"	10830	S	112	(21)		-	-
"	10838	S	112	JF	1200	-	-
"	10842	S	113	FF	12299	S	115
"	10845	S	113	XF	12299	S	115
"	10862	S	114	XF	12301	A	101
"	10864	S	114	BLT CAR RPL	12301	-	-
"	10884	S	115	MBR	12340	A	102
"	10886	S	115	XF	12475	S	109
"	10903	A	101	FF	12475	S	109
"	10905	A	101	"	12480	S	110
"	10915	A	102	MBR	12520	A	111
"	10923	A	102	"	12600	A	115
"	10935	A	105	EJC SPR RPL	12620	-	-
"	10983	A	105	MBR	12640	S	103

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MALFUNCTIONS AND FAILURES

ENG BR
RES & ENG DIV

(9) Gun Serial No. 109068

MAL OR FAILURE	ROUNDS FIRED	TYPE FIRE	MAG NO.	MAL OR FAILURE	ROUNDS FIRED	TYPE FIRE	MAG NO.
"	12680	S	104	XF	16533	A	102
"	12720	S	111	XF	16545	A	103
"	12940	A	101	MBR	16580	A	104
"	13000	A	105	FF	16728	A	112
JF	12000	-	-	FF	16737	A	112
(27)		-	-	JF	16758	A	113
JF	13000	-	-	"	16764	A	114
MBR	13020	S	106	FF	16905	A	106
"	13040	S	106	FF	17232	S	112
MAG 115 RPL	13200	-	-	XF	17356	A	104
BY MAG 175							
JF	13000	-	-	XF	17440	A	107
(33)		-	-	"	17448	S	108
JF	14000	-	-	"	17449	S	108
BLT RPL	13399	-	-	"	17460	S	108
HAM SPR	14520	-	-	EXT SPR	17460	-	-
RPL				RPL			
CF	14683	S	115	FF	17522	A	112
FF	15824	S	112	FF	17525	A	112
BLT CAR	16000	-	-	MCI	17719	A-	106
RPL							
MBR	16260	S	103	BLT RPL	18000	-	-
HFH	16342	A	108	JF	18165	A	109
"	16355	A	108	FF	18318	A	101
"	16358	A	108	"	18357	A	103

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MALFUNCTIONS AND FAILURES

ENG BR
RES & ENG DIV

(9) Gun Serial No. 109068

MAL OR FAILURE	ROUNDS FIRED	TYPE FIRE	MAG NO.	MAL OR FAILURE	ROUNDS FIRED	TYPE FIRE	MAG NO.
"	18546	A	111	"	19350	A	103
"	18551	A	113	"	19355	A	103
"	18598	A	115	GDE ASSY	19380	-	-
"	18823	S	112	RPL	19574	A	114
"	18828	S	112	JF	19738	A	106
"	18832	S	112	"	19739	A	106
"	18837	S	112	MSB	19788	A	110
"	18920	A	101	"	19794	A	110
FDF	18940	A	102	"	19800	A	110
JF	18000	-	-	FF	19892	S	115
(13)				"	19895	S	115
JF	19000	-	-	"	19925	A	102
HLB	19139	A	107	"	19956	A	102
"	19170	A	109	JF	20419	S	111
"	19173	A	109	FF	20525	A	102
"	19179	A	109	FDF	20747	A	113
JF	19271	S	114	FDF	20748	A	113
HLB	19310	A	101	JF	21192	A	110
"	19325	A	102	FDF	21222	S	112
"	19330	A	102	"	21226	S	112
"	19337	A	102	"	21229	S	112
"	19345	A	103	"	21239	S	112

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MALFUNCTIONS AND FAILURES

ENG BR
RES & ENG DIV

(9) Gun Serial No. 109068

MAL OR FAILURE	ROUNDS FIRED	TYPE FIRE	MAG NO.	MAL OR FAILURE	ROUNDS FIRED	TYPE FIRE	MAG NO.
MBR	22040	S	102	FF	23298	S	115
MBR	22060	S	103	MBR	23400	A	105
JF	22151	A	108	JF	23400	A	105
"	22271	S	114	MBR	23540	A	112
"	22287	S	115	JF	23544	A	114
MBR	22360	A	101	FF	23570	A	114
JF	22379	A	104	MBR	23640	S	102
MBR	22460	S	108	"	23760	A	108
MBR	22640	S	102	"	23760	A	109
"	22780	A	109	"	23800	A	110
JF	22872	S	114	HLB	23802	S	111
"	22888	S	115	JF	23995	A	105
"	22939	A	102	MBR	24140	A	107
MBR	22960	A	103	JF	24170	A	109
JF	22995	A	105	MBR	24200	A	110
MBR	23100	S	105	JF	24237	S	112
"	23180	A	109	MBR	24240	S	112
JF	23189	A	110	JF	24255	S	113
"	23190	A	110	MBR	24360	A	103
MBR	23260	S	113	JF	24537	A	113
JF	23262	S	114	"	24555	A	114
MBR	23280	S	114	"	24563	A	115

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MALFUNCTIONS AND FAILURES

ENG BR
RES & ENG DIV

(9) Gun Serial No. 109068

MAL OR FAILURE	ROUNDS FIRED	TYPE FIRE	MAG NO.	MAL OR FAILURE	ROUNDS FIRED	TYPE FIRE	MAG NO.
DCNT RPL	24672	-	-	FF	25482	S	110
HLB	24697	S	105	MSB	25585	A	115
JF	24713	A	106	MBR	25620	S	101
"	24725	A	106	"	25640	S	102
MBR	24740	A	108	HLB	25650	S	102
"	24760	A	108	MBR	25740	A	107
"	24780	A	109	"	25980	A	104
JF	24797	A	110	JF	25000	-	-
"	25104	A	106	(29)			
"	25114	A	106	JF	26000	-	-
"	25125	A	107	HAM SPR RPL	26000	-	-
"	25135	A	107	FF	26010	A	106
"	25143	A	108	EJC SPR RPL	26261	-	-
"	25150	A	108	MBR	26400	A	105
EXT SPR RPL	25160	-	-	"	26460	S	108
MBR	25180	A	108	"	26740	A	107
"	25200	A	110	"	26760	A	108
"	25280	S	111	JF	26000	-	-
MBR	25260	S	112	(42)			
"	25340	A	102	JF	27000	-	-
"	25400	A	105				
FF	25425	S	107				

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MALFUNCTIONS AND FAILURES

(10) Gun Serial No. 105083

MALFUNCTION OR FAILURE	ROUNDS FIRED	TYPE FIRE	MAG NO.	MALFUNCTIONS OR FAILURE	ROUNDS FIRED	TYPE FIRE	MAG NO.
HLB	303	S	116	HLB	5923	A	117
HLB	318	S	116	JF	6007	S	116
				Ejector Spring Replaced	6100		
HLB	340	S	117				
MBR	620	S	116	JF	6473	S	124
MBR	940	A	117	JF	6511	A	126
MBR	980	A	119	XF	6537	A	127
JF	1060	S	123	XF	6547	A	128
MBR	1300	S	120	Extractor Spring Replaced	6560		
MBR	1360	A	123				
FF	1503	A	116	FDF	8121	A	127
MBR	1540	A	117	LBF	8225	S	117
FF	1801	S	116	FF	8321	A	122
MSB	3180	A	124	FF	8341	A	123
MBR	3200	A	125	FF	8521	A	117
JF	3266	S	129	FF	8641	S	123
HLB	3991	A	120	FF	8941	A	121
HLB	3992	A	120	Bolt Carrier Replaced	9000		
FF	4601	S	122	MBR	9000		
MBR	4700	S	126	(22)	to		
MBR	5040	S	116	MBR	10000		
FF	5601	S	116	MCI	9000		

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MALFUNCTIONS AND FAILURES

(10) Gun Serial No. 105083

MALFUNCTION OR FAILURE	ROUNDS FIRED	TYPE FIRE	MAG NO.	MALFUNCTION OR FAILURE	ROUNDS FIRED	TYPE FIRE	MAG NO.
6	to			JF	11027	S	117
MCI	10000			JF	11036	S	117
JF	9000			JF	11046	S	118
(11)	to			JF	11054	S	118
JF	10000			MBR	11080	S	119
JF	10000			JF	11092	S	120
(27)	to			JF	11123	A	122
JF	11000			JF	11144	A	123
MCI	10000			JF	11165	A	124
(5)	to			JF	11199	A	125
MCI	11000			FF	11204	S	126
FF	10000			JF	11401	A	120
(6)	to			MBR	11460	S	123
FF	11000			FF	11462	S	124
HLB	10222			MBR	11580	A	128
Ejector Spring Replaced	10233						
Hammer Spring Replaced	10233			MBR	11600	A	129
MBR	10260	S	127	JF	11710	A	121
MBR	10300	S	130	FF	11803	S	126
Receiver Modified	11000			MBR	11860	S	129

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MALFUNCTIONS AND FAILURES

(10) Gun Serial No. 105083

MALFUNCTION OR FAILURE	ROUNDS FIRED	TYPE FIRE	MAG NO.	MALFUNCTIONS OR FAILURE	ROUNDS FIRED	TYPE FIRE	MAG NO.
MBR	11880	S	130	MBR	13400	A	125
MSB	11932	A	117	MBR	13420	A	126
MBR	11940	A	117	MBR	13440	S	127
MSB	11958	A	117	JF	13705	A	126
MBR	11980	A	119	HFH	13768	A	129
MSB	11988	A	120	XF	13769	A	129
JF	12112	A	121	MBR	13800	A	130
JF	12217	S	126	HFH	13920	A	121
Bolt Replaced	12262			MBR	14240	S	121
JF	12531	A	126	HFH	14520	A	121
MBR	12540	A	127	HFH	14522	A	121
MBR	12560	A	128	HFH	14526	A	121
MBR	12680	S	119	MBR	14700	S	130
MBR	12700	S	120	MBR	14960	A	128
MBR	12760	S	123	MBR	15180	A	124
MBR	12780	S	124	MBR	15360	A	118
MBR	12800	S	125	MBR	15440	S	122
MBR	13000	A	120	MBR	15460	S	123
MBR	13180	A	128	MBR	15560	A	128
FF	13182	A	130	MBR	15720	A	121
FF	13183	A	130	MBR	15760	A	123

MALFUNCTIONS AND FAILURES

(10) Gun Serial No. 105083

MALFUNCTION OR FAILURE	ROUNDS FIRED	TYPE FIRE	MAG NO.	MALFUNCTION OR FAILURE	ROUNDS FIRED	TYPE FIRE	MAG NO.
MBR	15800	A	125	FF	18337	A	117
JF	15857	S	128	HLB	18545	A	130
JF	15956	A	118	MSB	18733	A	122
JF	16000			MBR	18980	A	120
(35)	to						
JF	17000						
Bolt Replaced	16600						
MBR	16540	A	117				
MBR	16560	A	118				
MBR	16760	A	128				
MBR	16940	A	122				
JF	17179	A	124				
JF	17200	A	125				
JF	17260	S	128				
JF	17479	S	124				
JF	17576	A	128				
JF	17591	A	129				
JF	18000						
(28)	to						
JF	19000						
FF	18082	S	120				

MALFUNCTIONS AND FAILURES

(11) Gun Serial No. 109085

MALFUNCTION OR FAILURE	ROUNDS FIRED	TYPE FIRE	MAG NO.	MALFUNCTION OR FAILURE	ROUNDS FIRED	TYPE FIRE	MAG NO.
MBR	14473	S	318	JF	18829	A	318
JF	16000	-	-	JF	18844	A	318
(36)				JF	18846	A	318
JF	18000	-	-	JF	18857	A	318
MSB	17296	S	169	HFR	18860	A	168
HLB	17303	A	307	HFR	18861	A	168
MSB	17374	A	317	HFR	18862	A	168
FUR	17643	S	67	JF	19138	A	67
JF	18101	A	68	JF	19522	A	68
MSB	18130	A	318	JF	19678	S	169
BUFFER RINGS REPLACED	18224	A	307	JF	19738	A	67
MBR	18320	A	167	JF	19750	A	317
JF	18430	A	69	JF	19903	A	309
FF	18448	A	319	FF	20150	A	318
MBR	18520	S	67	HFR	20161	A	168
XF	18728	S	317	BUFFER REPLACED	20180	-	-
XF	18729	S	317	JF	20247	S	69
EXTRACTOR SPRING REPLACED	18728	-	-	BOLT REPLACED	20501	-	-
JF	18828	A	68	DISCONNECTOR REPLACED	21000	-	-

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<u>MALFUNCTION OR FAILURE</u>	<u>ROUNDS FIRED</u>	<u>TYPE FIRE</u>	<u>MAG NO.</u>	<u>MALFUNCTION OR FAILURE</u>	<u>ROUNDS FIRED</u>	<u>TYPE FIRE</u>	<u>MAG NO.</u>
MBR	21240	S	69				
MBR	21580	S	169				
MBR	21740	A	68				
MBR	21780	A	168				
MBR	21840	S	69				
MBR	22100	A	167				
MBR	22380	A	167				
MBR	22540	A	69				
MBR	22580	A	169				
MBR	22940	A	67				
MBR	22960	A	317				
MSB	23375	A	167				
MSB	23375	S	168				
JF	23515	A	309				
JF	23537	A	69				
JF	23578	A	169				
EJECTOR SPRING REPLACED	23578	-	-				
MBR	23740	A	308				
JF	24114	A	308				
MSB	24138	A	68				
JF	24850	S	319				
JF	24998	A	167				
BUFFER REPLACED	25000	-	-				

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MALFUNCTIONS AND FAILURES

(12) Gun Serial No. 122429)

MALFUNCTIONS OR FAILURE	ROUNDS FIRED	TYPE FIRE	MAG NO.	MALFUNCTION OR FAILURE	ROUNDS FIRED	TYPE FIRE	MAG NO.
MBR	700	S	180	JF	6273	S	322
HLB	873	S	189	MBR	6300	S	172
HLB	874	S	189	JF	6348	A	70
JF	1866	S	322	JF	6391	A	170
MBR	2040	S	71	MBR	6400	A	170
MBR	2200	A	172	JF	6412	S	311
HLB	2999	A	171	MBR	6440	S	71
JF	3061	S	320	JF	6440		
JF	3090	S	70	(38)	1		
MBR	3100	S	70	JF	7000		
JF	3669	S	320	MBR	6540	A	72
MBR	3900	S	172	MBR	6600	A	172
MBR	5180	A	321	MSB	6730	A	71
JF	6132	A	71	FDF	6745	A	321
JF	6139	A	71	MSB	6784	A	171
JF	6182	A	171	MBR	7200	A	171
JF	6184	A	171	MBR	7340	A	70
JF	6207	S	312	MBR	7400	A	170
JF	6208	S	312	FDF	7554	A	322
JF	6243	S	72	FDF	7560	A	322
JF	6244	S	72	MBR	7940	A	70
MBR	6260	S	322	JF	7000		

MALFUNCTIONS AND FAILURES

(12) Gun Serial No. 122429

MALFUNCTION OR FAILURE	ROUNDS FIRED	TYPE FIRE	MAG NO.	MALFUNCTION OR FAILURE	ROUNDS FIRED	TYPE FIRE	MAG NO.
(27)	to			MBR	9400	A	170
JF	8000			MBR	9540	A	72
MBR	8140	A	71	MBR	9600	A	172
MBR	8440	S	71	MBR	9740	A	71
MBR	8500	S	171	JF	9898	A	171
MBR	8600	A	172	MBR	9840	S	72
MBR	8640	S	70	MBR	9900	S	172
MBR	8700	S	170	MBR	9940	A	70
MBR	8800	A	171	MBR	10000		
MBR	8820	S	312	(9)	to		
MBR	8860	A	70	MBR	11000		
MBR	8880	A	320	(8)	to		
MBR	9040	S	70	MBR	12000		
MBR	9100	S	170	JF	11323	A	310
HLB	9108	A	311	JF	11927	A	310
JF	9116	A	311	JF	11949	A	70
MBR	9140	A	71	JF	12013	S	310
JF	9198	A	171	MBR	12020	S	310
MBR	9200	A	171	MBR	12200	A	171
MBR	9240	S	72	JF	12249	S	72
JF	9289	S	172	MBR	12400	A	170
JF	9290	S	172	MBR	12440	S	71
MBR	9300	S	172	JF	12490	S	171

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MALFUNCTIONS AND FAILURES

(12) Gun Serial No. 122429

MALFUNCTION OR FAILURE	ROUNDS FIRED	TYPE FIRE	MAG NO.	MALFUNCTION OR FAILURE	ROUNDS FIRED	TYPE FIRE	MAG NO.
JF	12492	S	171	JF	13923	A	310
JF	12493	S	171	JF	13974	A	320
MBR	12500	S	171	JF	14184	A	172
MBR	12540	A	72	JF	14187	A	171
JF	12595	A	172	JF	14191	A	171
Auto fire	12802	S	312	JF	14196	A	171
Disconnecter replaced.	12802			JF	14371	A	320
MBR	12900	A	310	JF	14392	A	170
MBR	13220	A	171	FDF	14570	A	320
JF	13260	S	312	JF	15123	A	71
MBR	13300	S	172	JF	15126	A	71
MBR	13360	A	310	JF	15129	A	71
MBR	13400	A	170	JF	15133	A	71
JF	13449	S	311	XF	15192	A	171
JF	13474	S	321	Extractor Replaced	15192		
MBR	13500	S	171	JF	15389	A	170
MBR	13600	A	172	FF	15532	A	322
JF	13845	S	322	JF	15615	S	310
JF	13846	S	322	JF	15628	S	70
JF	13847	S	322	JF	15977	A	320
MBR	13900	S	172	Bolt Replaced	16000		

MALFUNCTIONS AND FAILURES

(12) Gun Serial No. 122429

MALFUNCTION OR FAILURE	ROUNDS FIRED	TYPE FIRE	MAG NO.	MALFUNCTION OR FAILURE	ROUNDS FIRED	TYPE FIRE	MAG NO.
LBF	16220	S	312	JF	17276	S	322
LBF	16380	A	170	MBR	17300	S	172
Hammer Spring Replaced	16406			JF	17343	A	70
				JF	17356	A	70
JF	16494	S	171	JF	17378	A	320
JF	16527	A	312	JF	17457	S	71
FDF	16541	A	322	JF	17494	S	171
FDF	16545	A	322	JF	17648	S	70
JF	16791	A	171	JF	17659	S	70
JF	16793	A	171	JF	17684	S	170
JF	16796	A	171	JF	17686	S	170
JF	16826	S	72	JF	17777	A	321
JF	16838	S	322	MBR	17800	A	171
JF	16848	S	322	JF	17853	S	72
JF	16886	S	172	JF	17857	S	72
JF	16892	S	172	JF	17875	S	312
JF	16894	S	172	JF	17937	A	310
JF	16931	A	70	JF	17948	A	70
MBR	17100	S	170	JF	17967	A	320
JF	17242	S	72	JF	17974	A	170
JF	17255	S	322	JF	18010	S	310

APPENDIX C

REPORT
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MALFUNCTIONS AND FAILURES

(12) Gun Serial No. 12249

MALFUNCTION OR FAILURE	ROUNDS FIRED	TYPE FIRE	MAG NO.	MALFUNCTION OR FAILURE	ROUNDS FIRED	TYPE FIRE	MAG NO.
JF	18030	S	70	JF	18947	A	70
JF	18050	S	320	JF	19140	A	70
Ejector Spring Replaced	18100			Bolt rings Replaced	19380	A	172
Buffer Rings Replaced	18318			JF	19577	A	171
MBR	18440	A	72	JF	19818	S	311
XF	18457	A	322	JF	19917	A	312
XF	18471	A	172	JF	19955	A	322
FF	18728	S	320	Semi-auto Fire	20101	A	311
Buffer Ring Outer Replaced	18729			MCI	20599	A	172
MBR	18560	S	170	JF	20625	S	310
XF	18669	A	321	JF	20647	S	70
XF	18672	A	321	JF	20716	A	311
XF	18680	A	321	FF	20752	A	321
Extractor Spring Replaced (Defective)	18880			HLB	21159	A	321
				JF	21335	A	320
Extractor Spring Replaced	18880			Cam Pin Replaced	21600		
MBR	18728	S	72	Bolt Replaced	21700		

MALFUNCTIONS AND FAILURES

(12) Gun Serial No. 12249

MALFUNCTION OR FAILURE	ROUNDS FIRED	TYPE FIRE	MAG NO.	MALFUNCTION OR FAILURE	ROUNDS FIRED	TYPE FIRE	MAG NO.
JF	22177	A	321				
JF	22234	S	312				
FF	22325	A	310				
JF	22474	S	321				
JF	22947	A	70				
JF	22957	A	70				
JF	22974	A	320				
JF	22991	A	170				

APPENDIX B

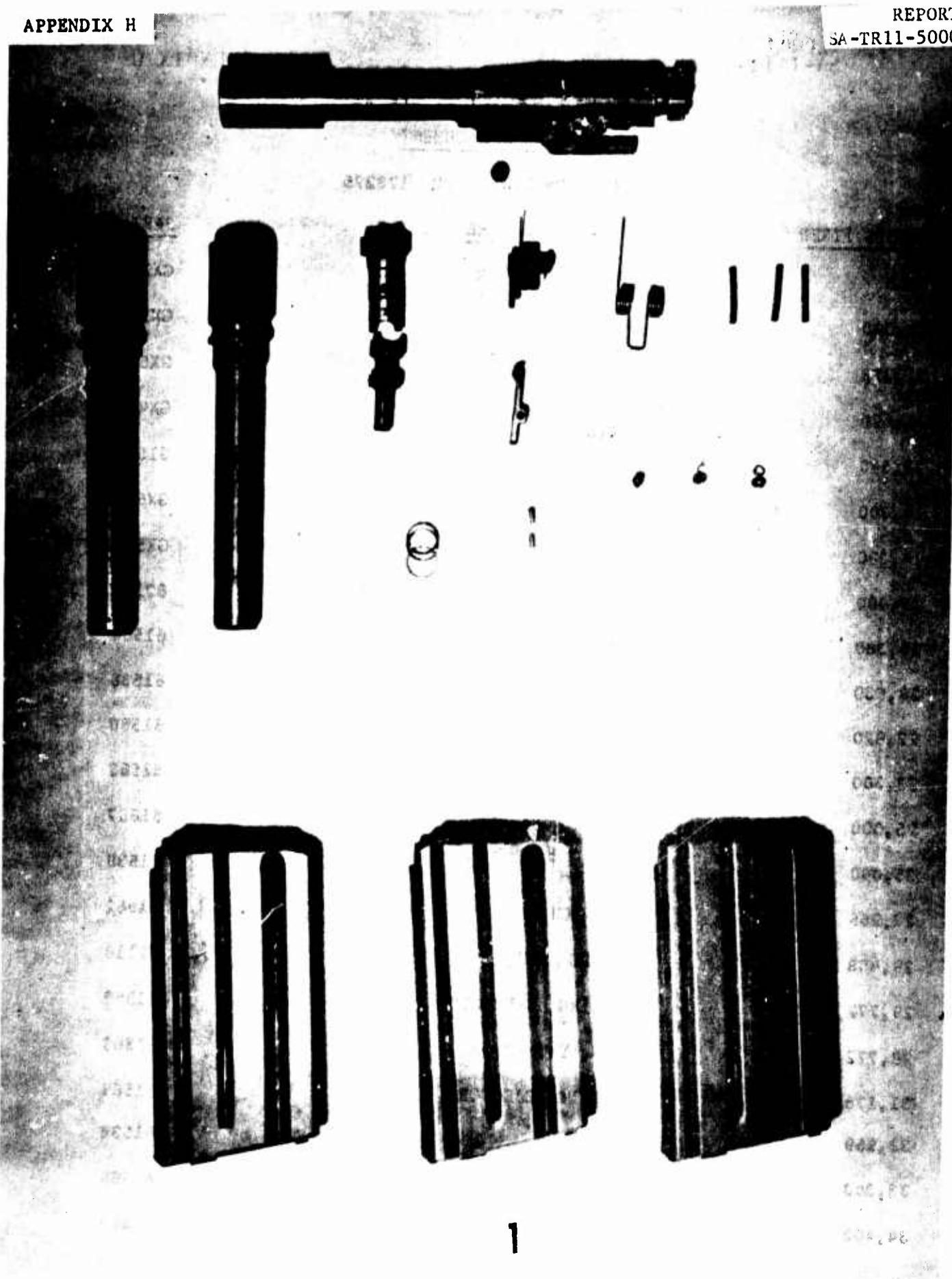
REPORT
JA-TR11-5000

Q1532	PHOTOGRAPHS (pages 205 through 227) depict unserviceable components as reflected by the individual listing (Parts Replacement) on facing page.	Q1533
Q1534	BOLT, BOLT	Q1535
Q1535	EXTRACTOR	Q1536
Q1536	CARTRIDGE, BOLT	Q1537
Q1537	BOLT	Q1538
Q1538	SPRING, HARKER	Q1539
Q1539	SPRING, FLECTOR	Q1540
Q1540	GUIDE ASSY, ACTION SPRING	Q1541
Q1541	SPRING, FLECTOR	Q1542
Q1542	BOLT	Q1543
Q1543	MAGAZINE ASSY	Q1544
Q1544	MAGAZINE ASSY	Q1545
Q1545	MAGAZINE ASSY	Q1546
Q1546	SPRING EXTRACTOR	Q1547
Q1547	GUIDE ASSY, ACTION SPRING	Q1548
Q1548	FIN, EXTRACTOR	Q1549
Q1549	SPRING, FLECTOR	Q1550
Q1550	SPRING, EXTRACTOR	Q1551

PARTS REPLACEMENT

(1) Gun Serial No. 108860

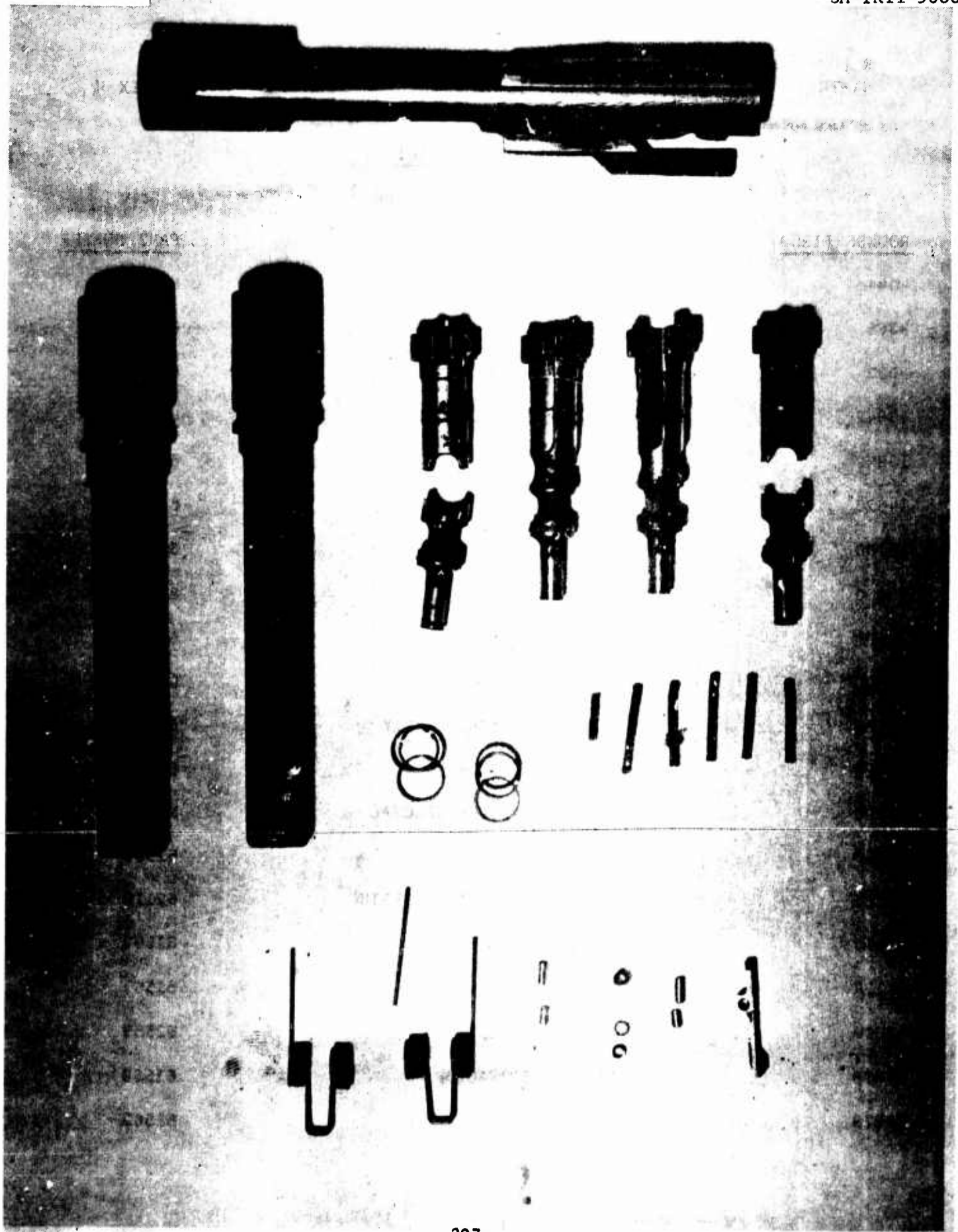
ROUNDS FIRED	NOMENCLATURE	PART NUMBER
759	SEAR, AUTOMATIC	61622
10360	SPRING, EJECTOR	GX5380
13141	RING, BOLT	61540
13428	EXTRACTOR	GX5555
14000	CARRIER, BOLT	GX5552
14000	BOLT	GX5282
14122	SPRING, HAMMER	GX4976
16100	SPRING, EJECTOR	GX5380
17830	GUIDE ASSY, ACTION SPRING	62119
18000	SPRING, EJECTOR	61569
19205	BOLT	61538
20722	MAGAZINE ASSY	62103
21140	MAGAZINE ASSY	62103
21440	MAGAZINE ASSY	62103
22000	SPRING EXTRACTOR	61568
23480	GUIDE ASSY, ACTION SPRING	62119
24880	PIN, EXTRACTOR	61563
26100	SPRING, EJECTOR	GX5380
26478	SPRING, EXTRACTOR	61568



PARTS REPLACEMENT

(2) GUN SERIAL NO. 123225

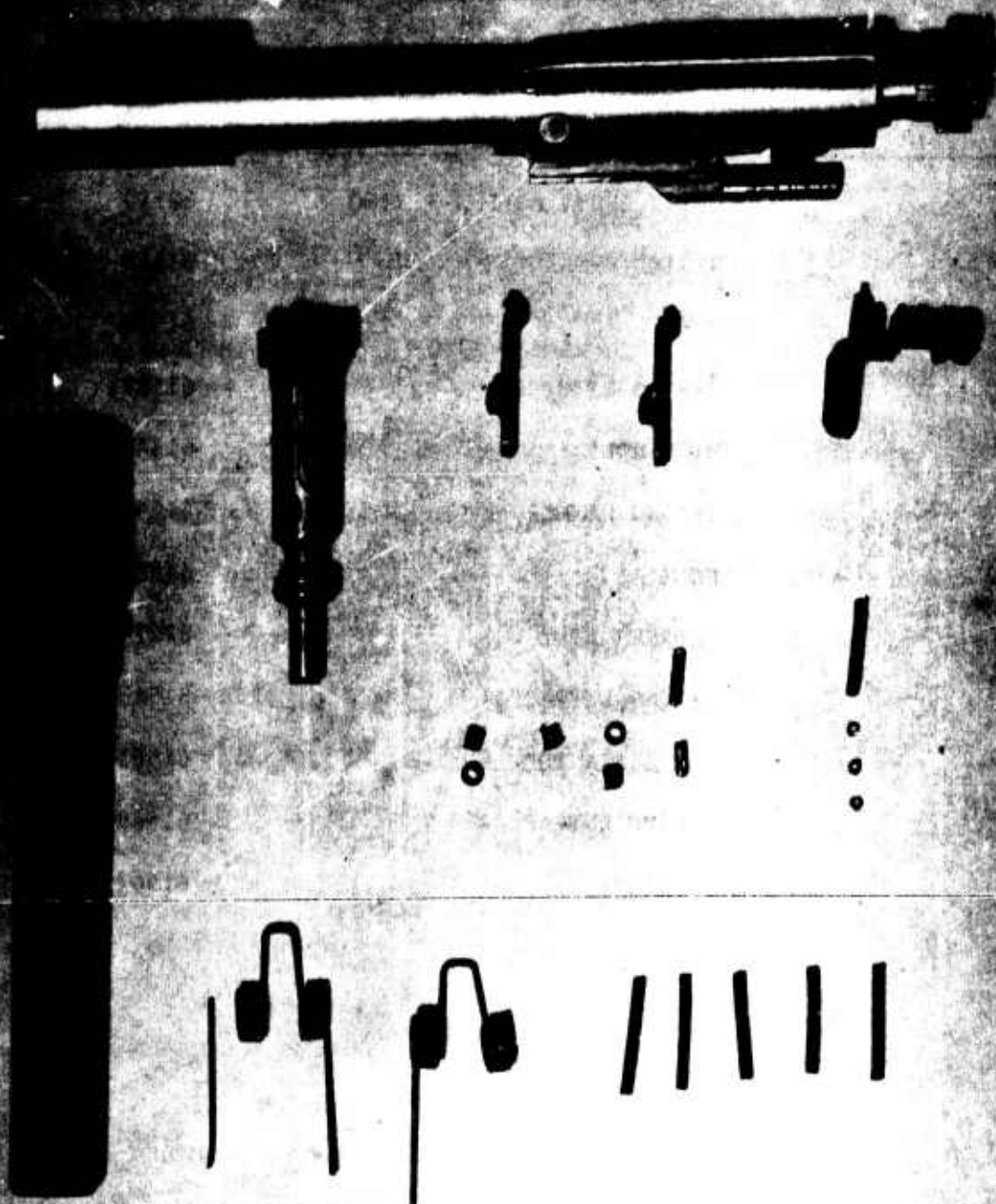
<u>ROUNDS FIRED</u>	<u>NOMENCLATURE</u>	<u>PART NUMBER</u>
8000	SPRING, EJECTOR	GX5380
11,000	RING, BOLT	GX1540
11,323	SPRING, EJECTOR	GX5380
11,620	SPRING, HAMMER	GX4976
13,540	RING,BOLT	G1540
14,000	CARRIER, BOLT	GX5552
14,000	BOLT	GX5282
18,000	GUIDE ASSY, ACTION SPRING	62119
19,380	SPRING, EJECTOR	61564
20,630	BOLT	61538
22,920	SPRING, EXTRACTOR	61568
23,300	PIN, EXTRACTOR	61563
25,000	SPRING, HAMMER	61697
25,000	BOLT	61538
27,966	EXTRACTOR	61562
29,458	GUIDE ASSY, ACTION SPRING	62119
29,772	SPRING, EXTRACTOR	61568
29,772	PIN, EXTRACTOR	61563
31,178	SPRING, EJECTOR	61569
33,969	BOLT.	61538
33,300	SPRING, EJECTOR	61569
34,400	SPRING, EJECTOR	61569



PARTS REPLACEMENT

(3) GUN SERIAL NO. 118603

<u>ROUNDS FIRED</u>	<u>NOMENCLATURE</u>	<u>PART NUMBER</u>
4044	PIN, EXTRACTOR	61563
4365	EXTRACTOR	61562
8000	SPRING, EJECTOR	61569
13842	SPRING, EXTRACTOR	61568
13842	PIN, EXTRACTOR	61563
14620	SPRING, HAMMER	61697
16000	BOLT	61538
16000	CARRIER, BOLT	62274
16200	SPRING, EXTRACTOR	61568
16200	SPRING, EJECTOR	61569
18102	LEVER SELECTOR, SAFETY	61959
23320	SPRING, EJECTOR	61569
24200	SPRING, EJECTOR SPECIAL	NONE
25000	BOLT	61538
27281	GUIDE ASSY, ACTION SPRING	62119
28998	SPRING, HAMMER	61697
31124	SPRING, EJECTOR	61569
32600	SPRING, EJECTOR	61569
34878	SPRING, EXTRACTOR	61568
34878	EXTRACTOR	61562



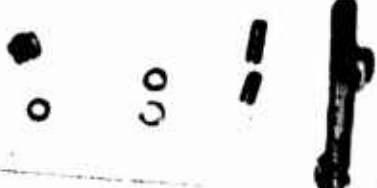
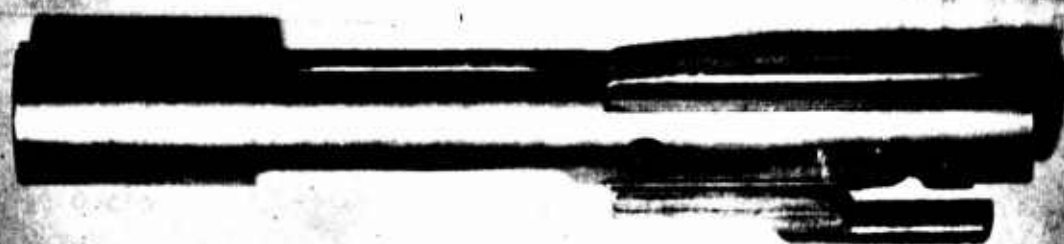
REPORT
SA-7P11-5000

APPENDIX L

PARTS REPLACEMENT

(4) Gun Serial No. 122033

<u>ROUNDS FIRED</u>	<u>NOMENCLATURE</u>	<u>PART NUMBER</u>
4000	GUIDE ASSY. ACTION SPRING	62119
4000	SPRING EXTRACTOR	61568
5000	BOLT	61538
8000	SPRING EJECTOR	61569
11282	RING BOLT	61540
11430	SPRING HAMMER	61697
14000	BOLT	61538
14000	CARRIER BOLT	62274
21000	SPRING EXTRACTOR	61568
27000	PIN EXTRACTOR	61563
27000	SPRING EXTRACTOR	61568
27240	EXTRACTOR	61562



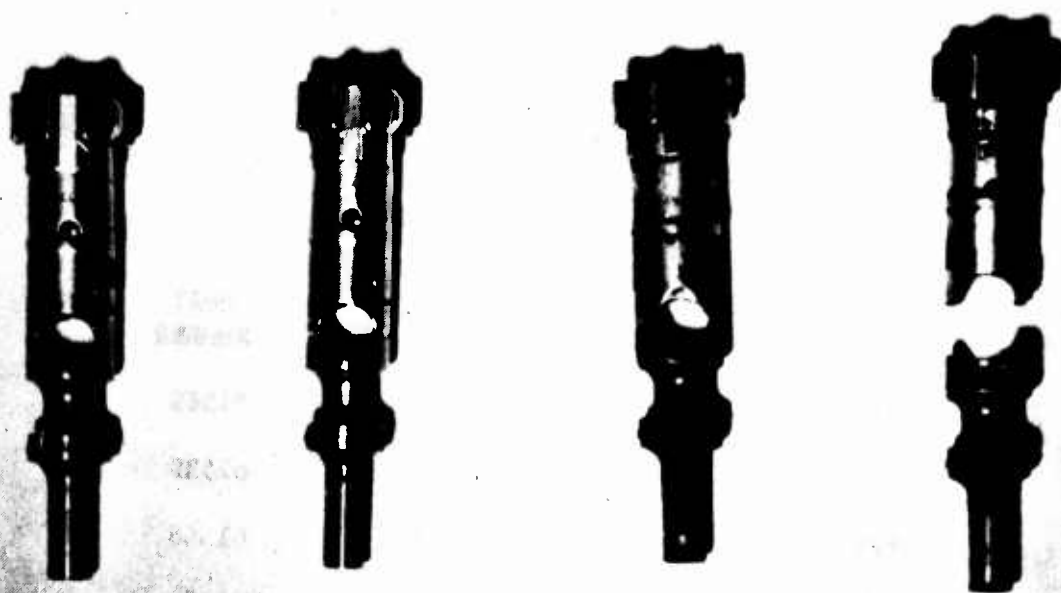
REPORT
SA-TR11-5000

APPENDIX H

PARTS REPLACEMENT

(5) Gun Serial No. 113821

<u>ROUNDS FIRED</u>	<u>NOMENCLATURE</u>	<u>PART NUMBER</u>
3000	BOLT	61538
6000	SPRING, EJECTOR (SPECIAL)	NONE
10220	RING, BOLT	61540
11000	MODIFIED RECEIVER	
17222	SPRING, HAMMER	61697
19780	EXTRACTOR	61562
19780	SPRING, EXTRACTOR	61568
26082	SPRING, HAMMER	61697
26583	SPRING, EXTRACTOR	61568
27400	BOLT	61538
29400	RING, BOLT	61540
30818	PIN, TRIGGER	61654
31000	BOLT	61538
32400	DISCONNECT	61918
33500	SPRING, EJECTOR	61569



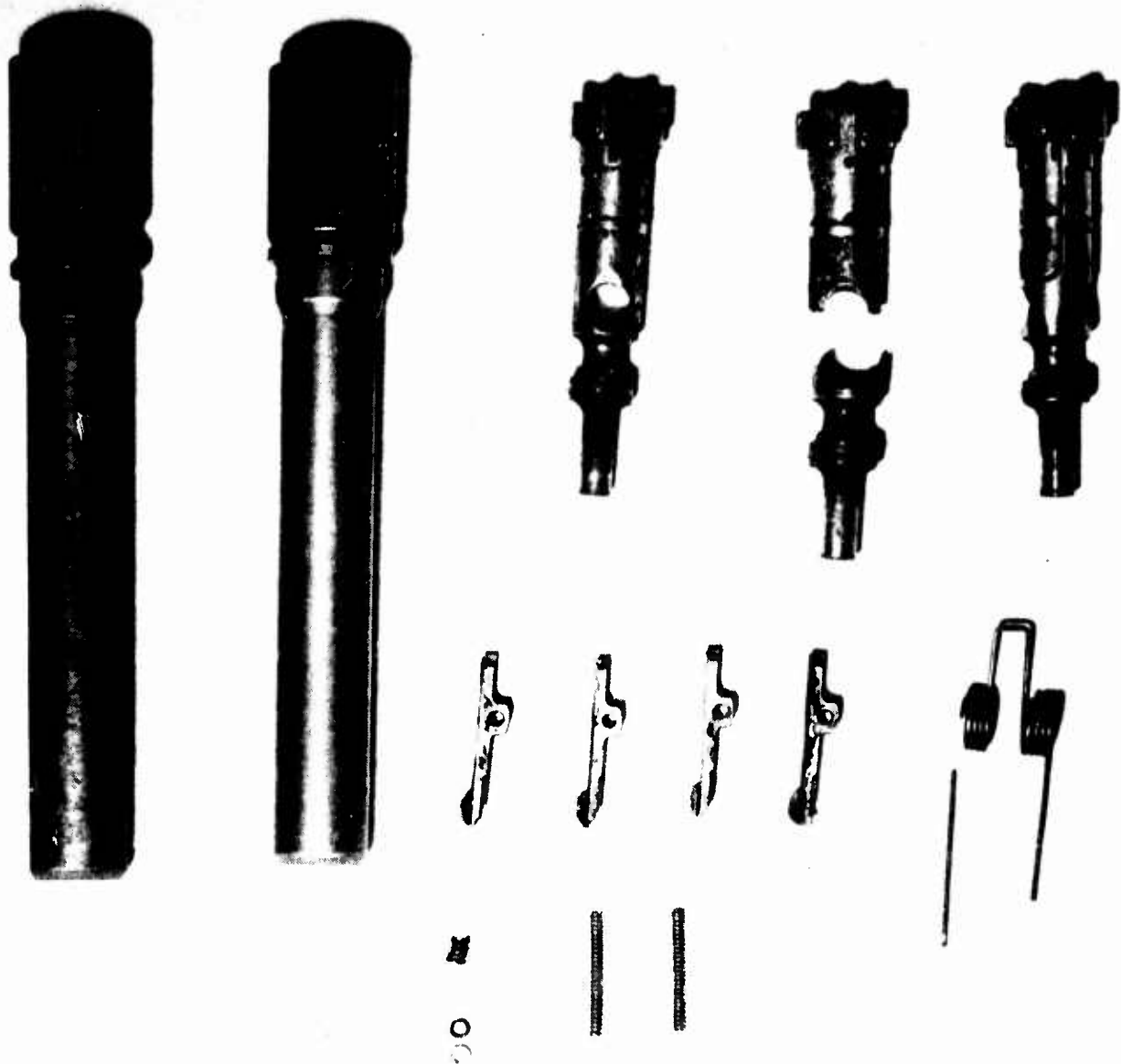
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REPORT
SA-TR 11-5000

APPENDIX H

PARTS REPLACEMENT
(6) GUN SERIAL NO, 122994

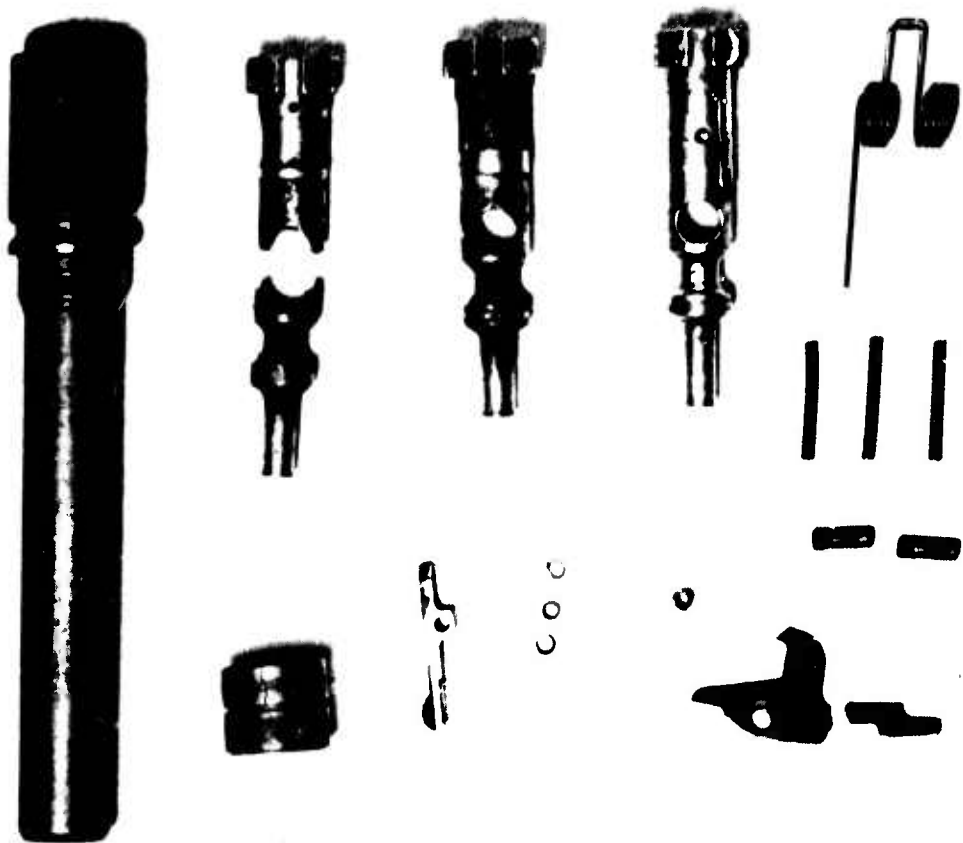
ROUNDS FIRED	NOMENCLATURE	PART NUMBER
2000	SPRING,EJECTOR	61569
6000	BOLT	61538
9370	SPRING,EXTRACTOR	61568
9491	EXTRACTOR	61562
11000	MODIFIED RECEIVER	
12097	GUIDE ASSY, ACTION SPRING	62119
14261	EXTRACTOR	61562
16595	BOLT	61538
19200	GUIDE ASSY, ACTION SPRING	62119
19290	SPRING,HAMMER	61697
19987	EXTRACTOR	61562
21802	SPRING,EXTRACTOR	61568
24740	EXTRACTOR	61562
30000	BOLT	61538



PARTS REPLACEMENT

(7) Gun Serial No. 121654

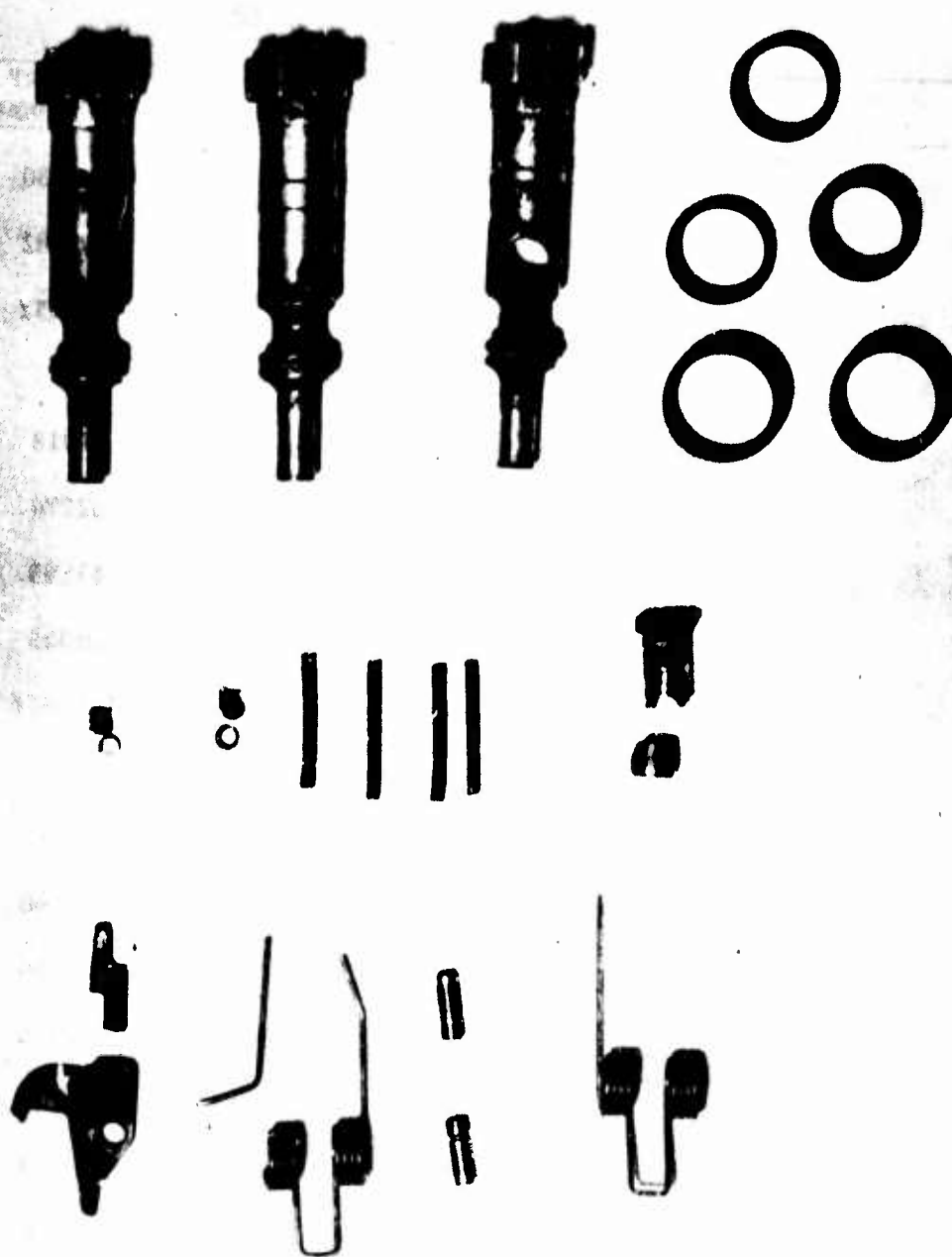
ROUNDS FIRED	NOMENCLATURE	PART NUMEER
2000	Spring, Ejector	61569
4000	Bolt	61538
5000	Guide Assy, Action Spring	62119
5140	Spring, Ejector	61569
9000	Bolt	61538
11166	Spring, Hammer	61697
12976	Bolt	61569
13180	Guide Assy, Action Spring	62119
15844	Spring, Extractor	61568
16485	Disconnect	61918
16485	Pin, Trigger	61654
20596	Spring, Ejector	61569
21835	Spring, Extractor	61568
21978	Bolt	61569



PARTS REPLACEMENT

(8) Gun Serial No. 121185

ROUNDS FIRED	NOMENCLATURE	PART NUMBER
2000	SPRING, EJECTOR	61569
3000	BOLT	61538
5000	BUFFER RINGS, OUTER	61578
6531	SPRING, EXTRACTOR	61568
7481	BOLT	61538
10487	SPRING, HAMMER	61697
11000	SPRING, EXTRACTOR	61568
12400	SPRING, EJECTOR (SPECIAL)	NONE
13000	BOLT	61538
13400	SPRING, EJECTOR	61569
18000	PIN, BOLT CAM	61704
19386	SPRING, EJECTOR	61569
20980	SPRING, HAMMER	61697
20980	DISCONNECT	61918
20980	PIN, TRIGGER	61654
21000	BOLT	61538



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PARTS REPLACEMENT

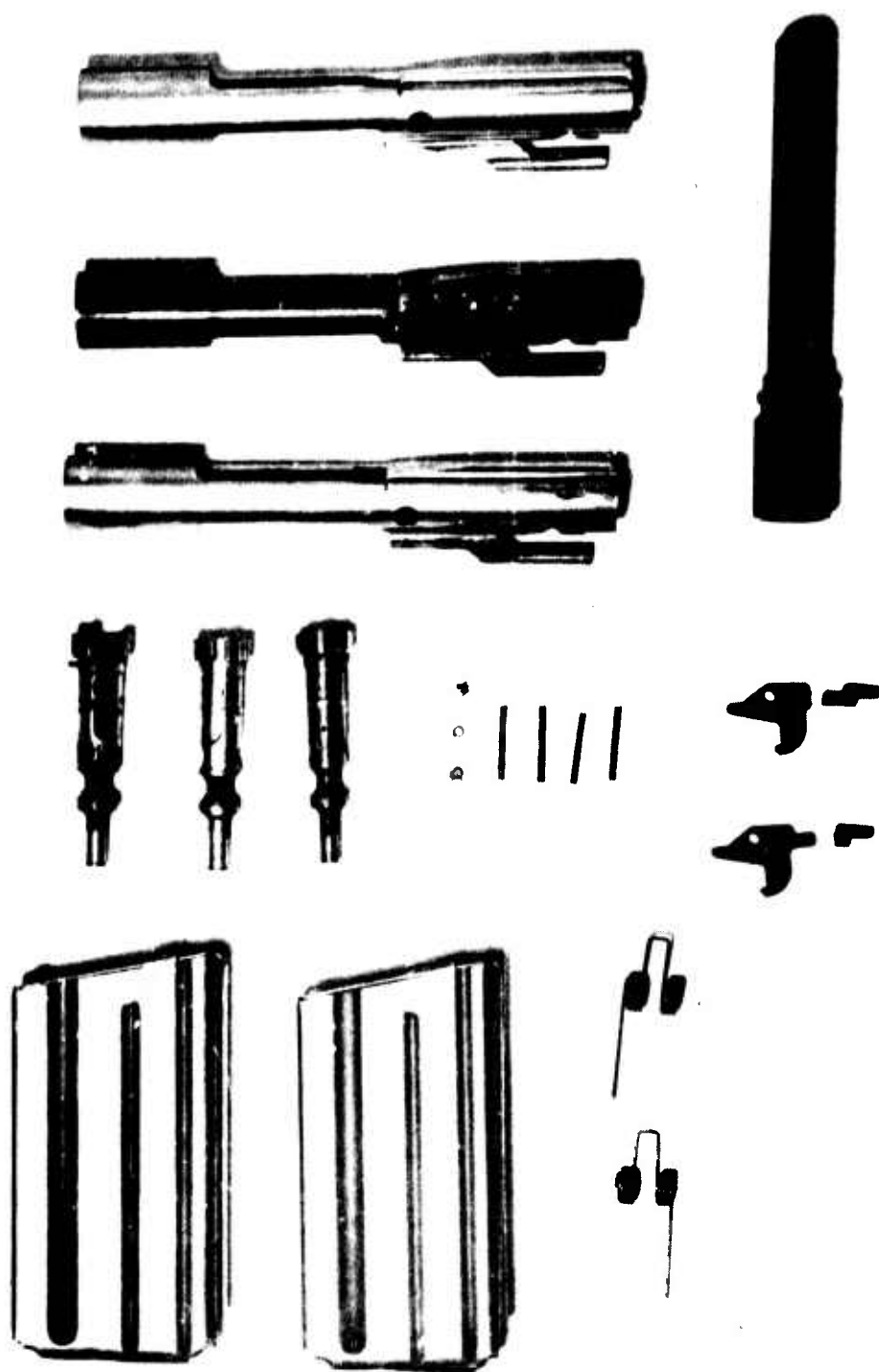
APPENDIX II

(9) Gun Serial No. 109068

<u>ROUNDS FIRED</u>	<u>NOMENCLATURE</u>	<u>PART NUMBER</u>
6968	SPRING EJECTOR	GX5380
8000	BOLT	GX5282
8000	CARRIER, BOLT	GX5552
(11000)	RECEIVER, MODIFIED	
11686	DISCONNECT	61918
12301	CARRIER, BOLT	62274
12620	SPRING, BOLT	61569
13999	BOLT	61538
14520	SPRING, HAMMER	GX4976
13200	MAGAZINE #115 (BY 175)	
16000	CARRIER, BOLT (SCREW BROKEN)	62274
17400	SPRING, EXTRACTOR	61568
18000	BOLT	61538
19380	GUIDE ASSY, ACTION SPRING	62119
19840	MAGAZINE #112	
24692	DISCONNECTOR	61918
25160	SPRING, EXTRACTOR	61568
26000	SPRING, HAMMER	61697
26261	SPRING, EJECTOR	61569
27000	BOLT	61538

APPENDIX H

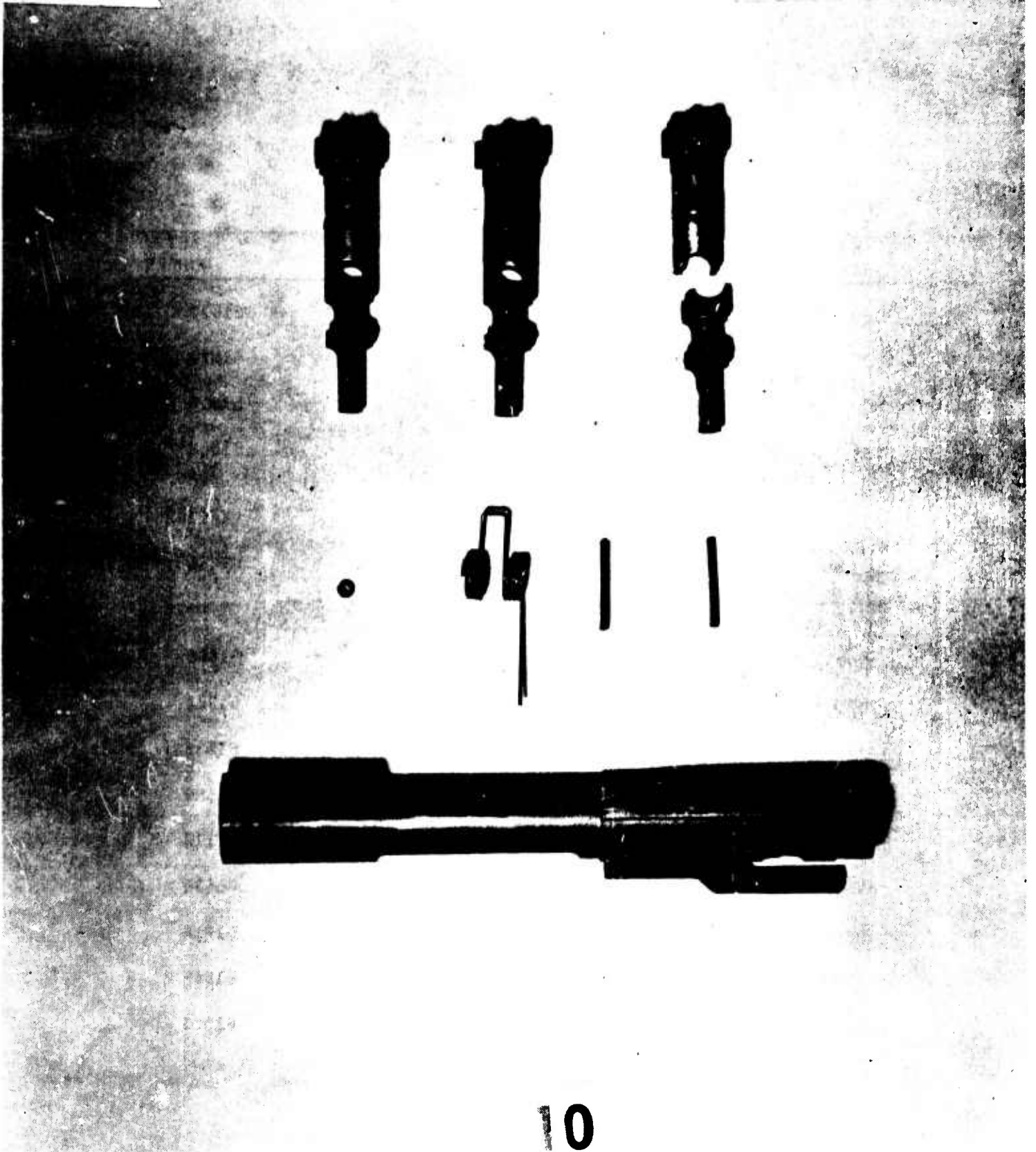
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PARTS REPLACEMENT

(10) GUN SERIAL NO. 105083

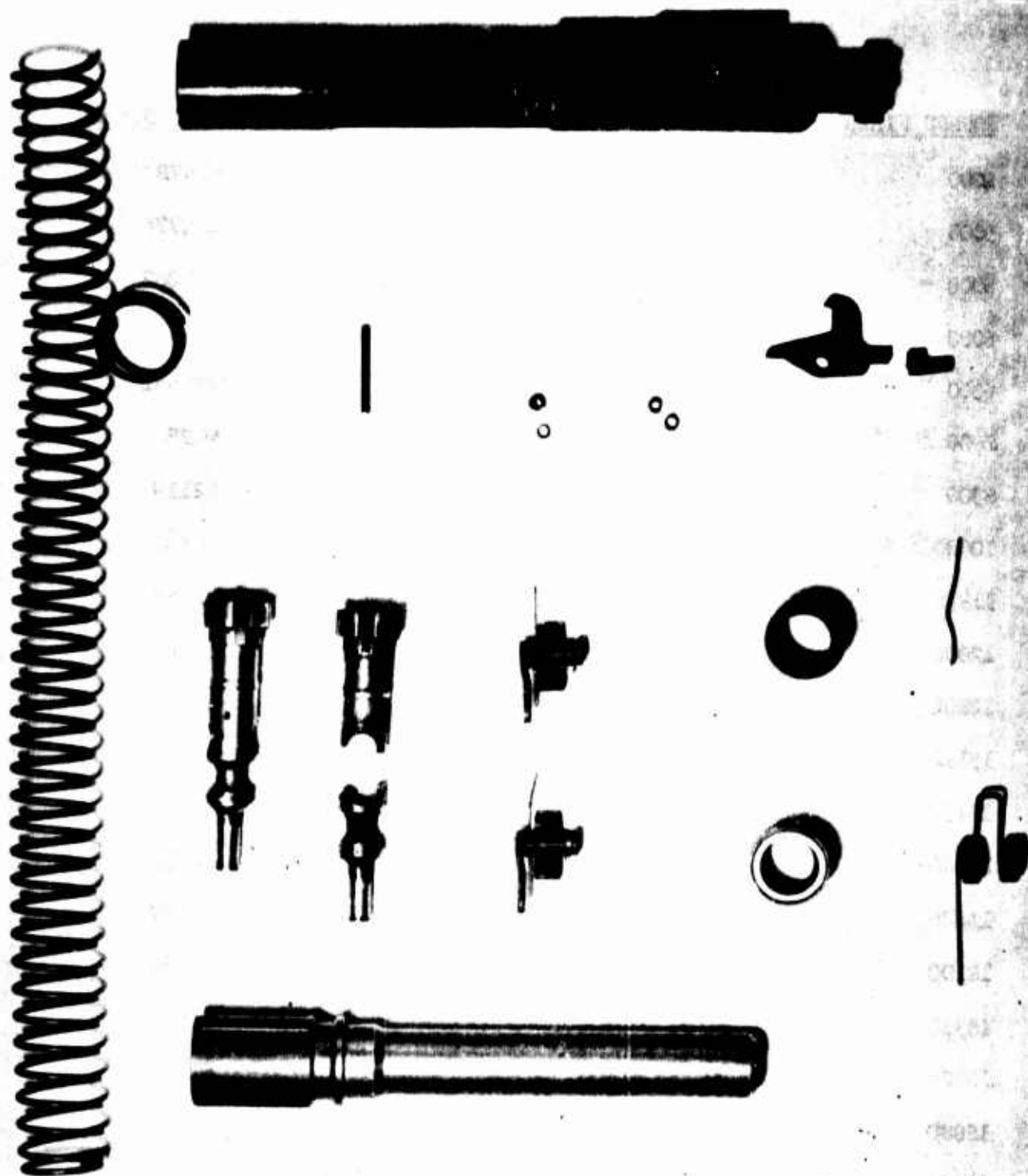
<u>ROUNDS FIRED</u>	<u>NOMENCLATURE</u>	<u>PART NUMBER</u>
6100	Spring Ejector	GK5380
6580	Spring Extractor	61568
9000	Bolt	GK5282
9000	Carrier Bolt	GK5552
10220	Spring Ejector	61569
10223	Spring Hammer	GK4976
12262	Bolt	61538
16600	Bolt	61538
(11000)	Receiver modified	
19,000	Spring Hammer	61697



PARTS REPLACEMENT

(11) GUN SERIAL NO. 109085

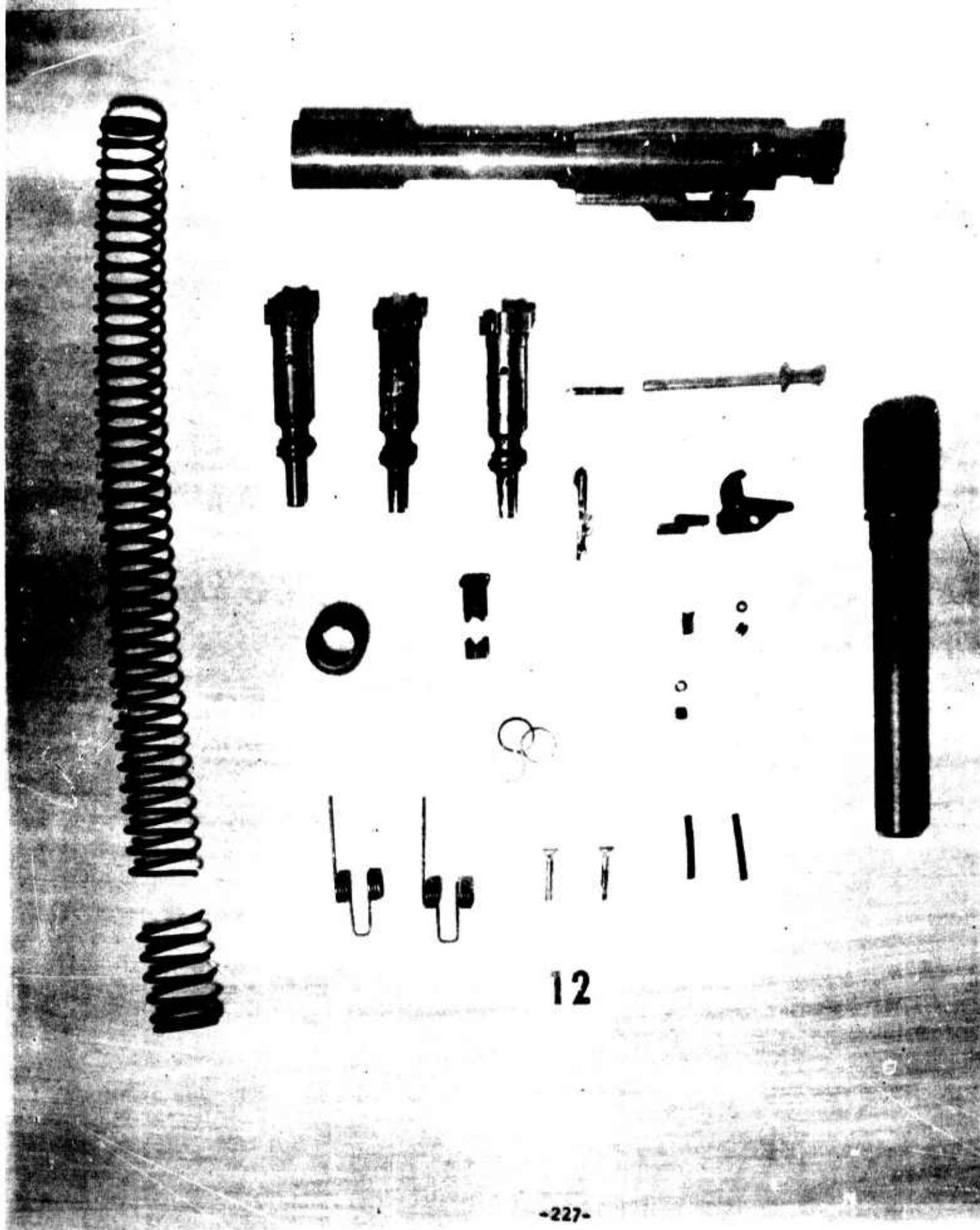
<u>ROUNDS FIRED</u>	<u>NOMENCLATURE</u>	<u>PART NUMBER</u>
3000	SEAR, AUTO	61622
4000	SEAR, AUTO	61622
5000	BUFFER RINGS, OUTER	61578
7187	SPRING, EXTRACTOR EJE - EXT ETC	61568
10273	BOLT	GX 5282
10273	CARRIER, BOLT	GX 5552
12326	SPRING, HAMMER	GX 4976
13000	BOLT	61538
13091	DISCONNECT	61918
18224	BUFFER RINGS, OUTER	61578
18738	SPRING, EXTRACTOR	61568
20180	GUIDE ASSY, ACTION SPRING	62119
20501	BOLT	61538
21000	DISCONNECT	61918
23578	SPRING, EJECTOR	61569
25000	SPRING, ACTION	61581

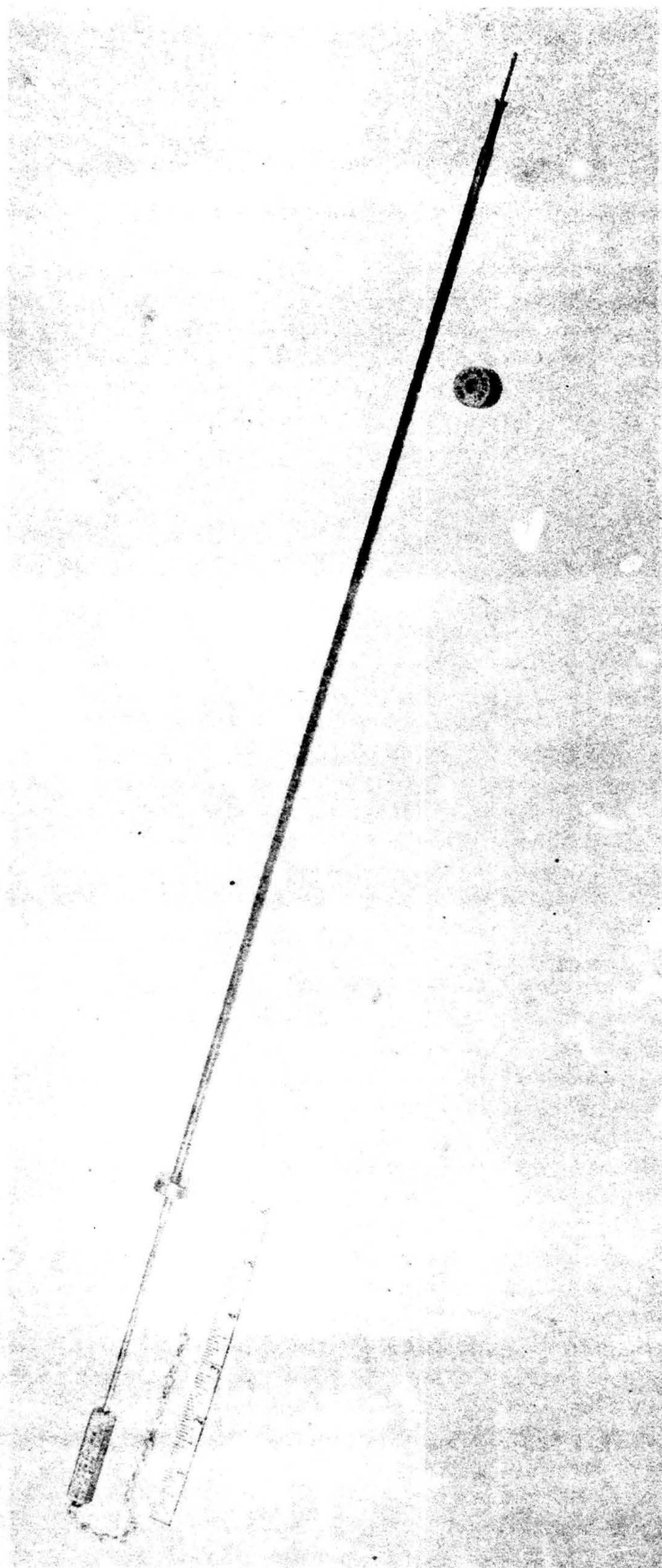


PARTS REPLACEMENT

(12) GUN SERIAL NO. 122429

<u>ROUNDS FIRED</u>	<u>NOMENCLATURE</u>	<u>PART NUMBER</u>
4000	BUFFER RINGS, OUTER	61578
5000	SPRING, HAMMER	GX4976
6000	BOLT	GX5282
6000	CARRIER, BOLT	GX5552
6000	PIN, FIRING	GX5554
8000	SPRING, EJECTOR (SPECIAL)	NONE
8300	GUIDE ASSEMBLY, ACTION SPRING	62119
10000	BOLT	61538
11970	SPRING, EXTRACTOR	61568
12000	PIN, FIRING, PIN RETAINING	61561
12802	DISCONNECT	61918
15192	EXTRACTOR	61562
15192	SPRING, EXTRACTOR	61568
16000	BOLT	61538
16406	SPRING, HAMMER	61697
18100	SPRING, EJECTOR	61569
18318	RING, BOLT	61540
18728	BUFFER RINGS, OUTER	61578
18880	SPRING, EXTRACTOR	61568
18880	DEFECTIVE EXT. SPRING AS RECEIVED	
21600	PIN, BOLT CAM	61704
21700	BOLT	61538

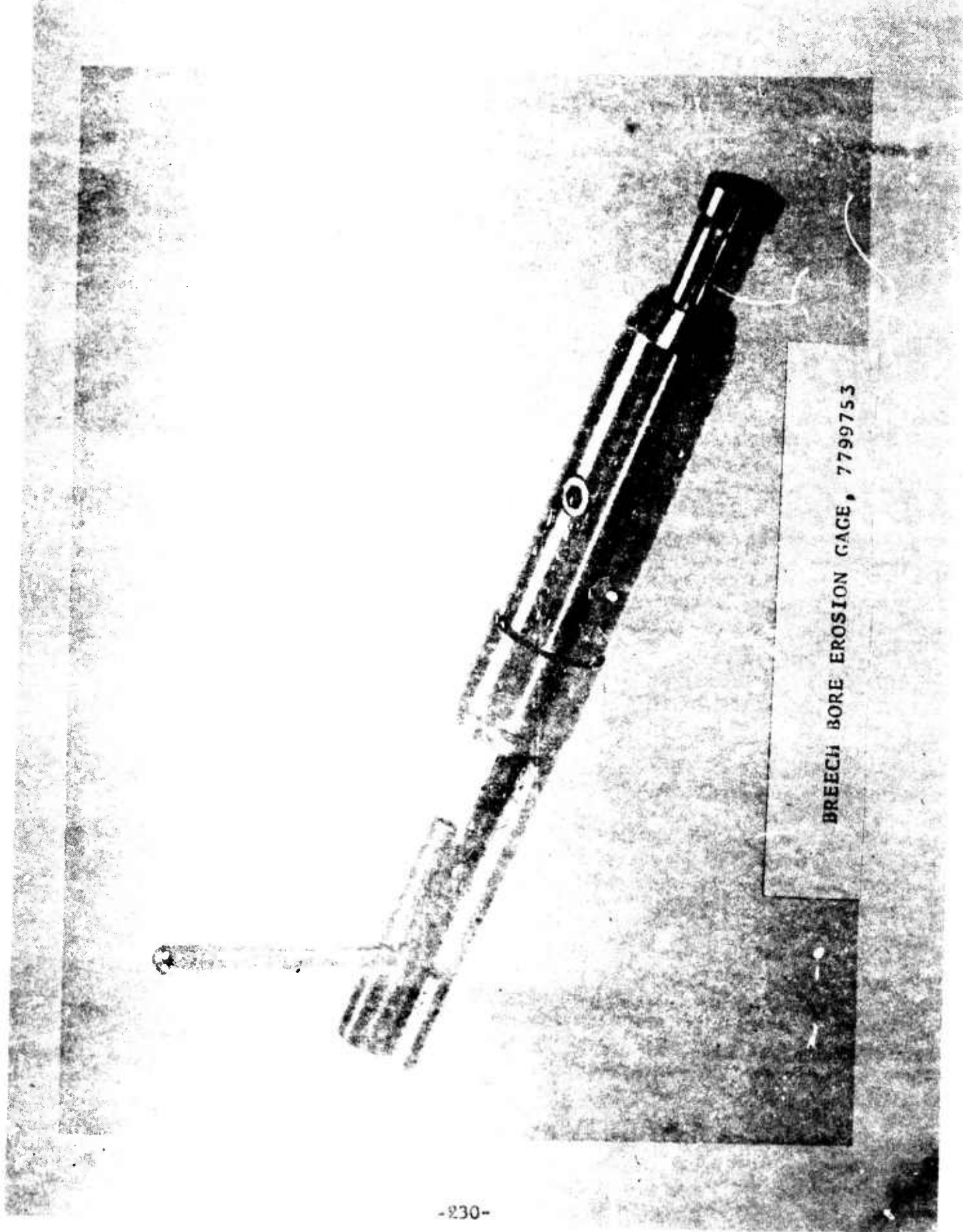


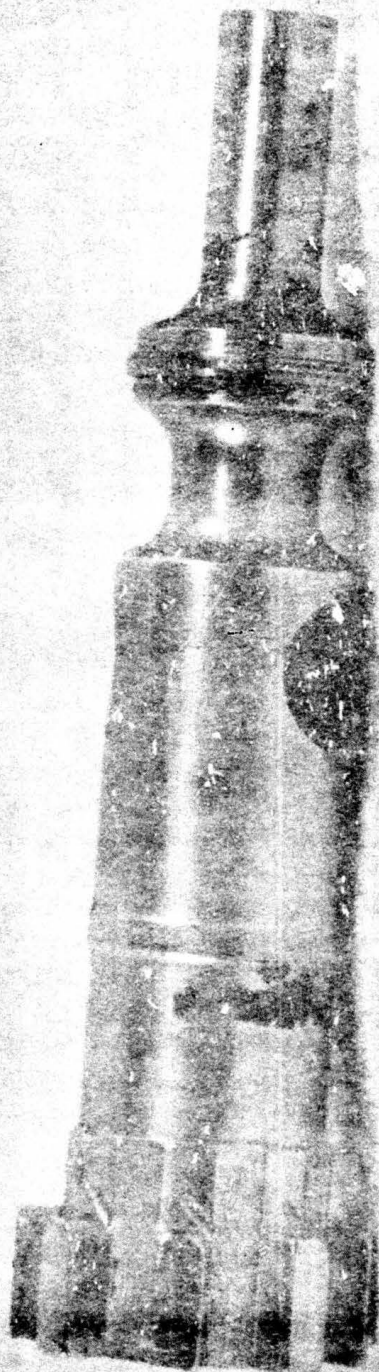


BARREL EROSION GAGE, 11017844
(expandable)

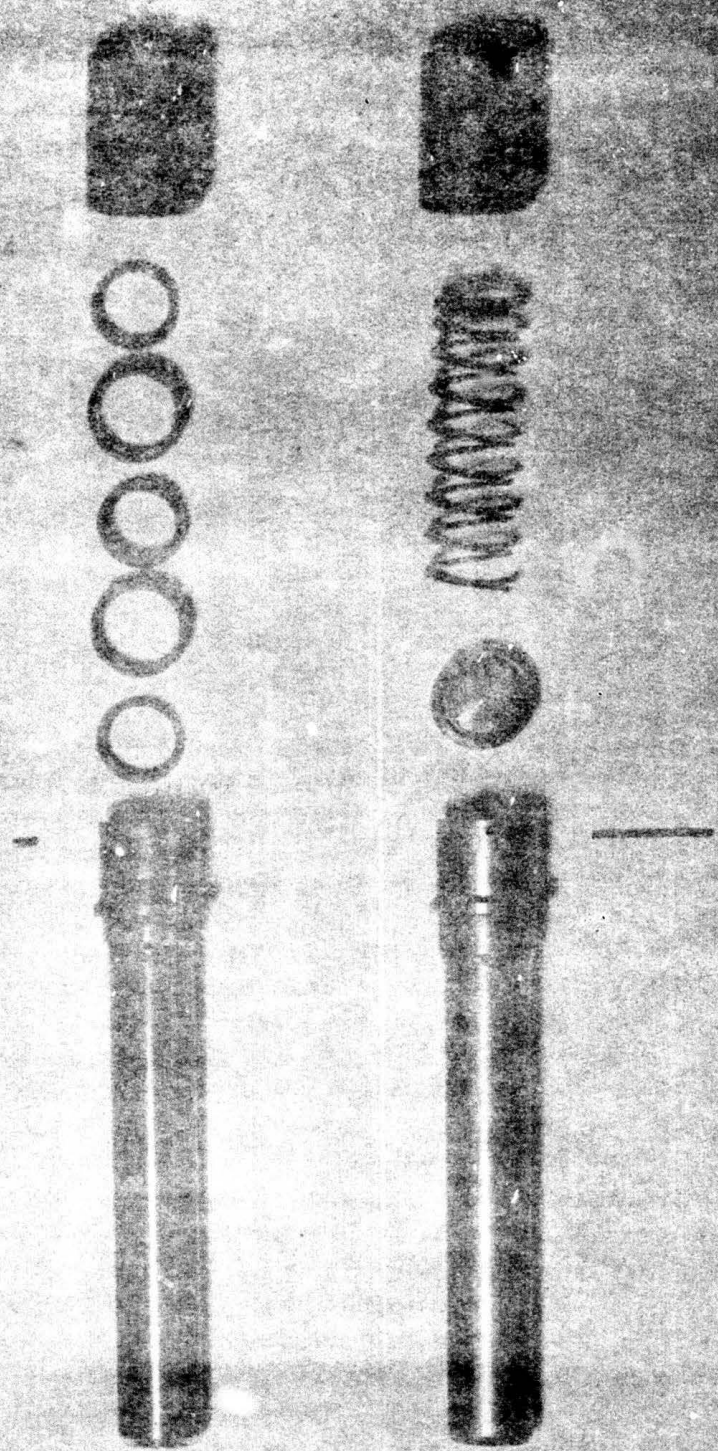
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APPENDIX H





STANDARD M16-M16E1 RIFLE BOLT
EXHIBITING CRACK THRU CAM PIN HOLE



TOP: STANDARD BUFFER
BOTTOM: EXPERIMENTAL BUFFER

APPENDIX H

REPORT
SA-TR11-5000

CLEAN UP

AREA

BEFORE LEAVING

FIRING STAND & JACK FOR ACCURACY FIRING

Unclassified

Security Classification

DOCUMENT CONTROL DATA - R&D		
(Security classification of title, body of abstract and indexing annotation must be entered when the overall report is classified)		
1. ORIGINATING ACTIVITY (Corporate author) Springfield Armory, Springfield, Massachusetts 01101		2a. REPORT SECURITY CLASSIFICATION Unclassified
		2b. GROUP N/A
3. REPORT TITLE Barrel Erosion Study of Rifles, 5.56MM, M16 and XM16E1 - A Joint Army - Air Force Test		
4. DESCRIPTIVE NOTES (Type of report and inclusive dates) Technical Report		
5. AUTHOR(S) (Last name, first name, initial) Landry, P. R. Nilsson, C. E.		
6. REPORT DATE March 1966	7a. TOTAL NO. OF PAGES 236	7b. NO. OF REFS None
8a. CONTRACT OR GRANT NO. b. PROJECT NO. c. AMCMS 4420.25.0132.2.26 d.	9a. ORIGINATOR'S REPORT NUMBER(S) SA-TR11-5000 9b. OTHER REPORT NO(S) (Any other numbers that may be assigned this report) None	
10. AVAILABILITY/LIMITATION NOTICES Qualified requesters may obtain copies of this report from DDC. Others may purchase copies of this report from Clearinghouse, Department of Commerce, Springfield, Virginia 22151		
11. SUPPLEMENTARY NOTES None	12. SPONSORING MILITARY ACTIVITY U.S. Army Materiel Command	
13. ABSTRACT Twelve rifles, 5.56mm, XM161E1 were fired to the end of their barrel bore service life. Measurements of the barrel bore were taken periodically with an air gage, and an expanding mandrel gage. It was determined that the maximum acceptable barrel bore diameter would be .2206 inches. The barrel bore was considered serviceable for either overseas or CONUS use if that diameter had not advanced forward of the origin of the rifling further than 3.625 inches. Advancement to 6.625 inches was considered the cut-off for CONUS use only, and advancement beyond 6.625 inches would constitute complete rejection of the barrel. Gage, Barrel Erosion C7799792, designed by Springfield Armory, is recommended for this purpose. Several M11 Cleaning Rods and .22 caliber bore brushes, 11010021, were tested and found to be inadequate. It is also recommended that several components be revised to reduce the breakage and malfunction rates and improve the reliability. Test procedures are described and results discussed.		

DD FORM 1473
1 JAN 64

Unclassified
Security Classification

14. KEY WORDS	LINK A		LINK B		LINK C	
	ROLE	WT	ROLE	WT	ROLE	WT
1. Barrels, Rifles, 5.56mm, M16, XM16E1						
2. Erosion, Rifle Barrels						
3. Rifles, 5.56mm, M16, XM16E1						

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8a. **CONTRACT OR GRANT NUMBER:** If appropriate, enter the applicable number of the contract or grant under which the report was written.

8b, 8c, & 8d. **PROJECT NUMBER:** Enter the appropriate military department identification, such as project number, subproject number, system numbers, task number, etc.

9a. **ORIGINATOR'S REPORT NUMBER(S):** Enter the official report number by which the document will be identified and controlled by the originating activity. This number must be unique to this report.

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It is highly desirable that the abstract of classified reports be unclassified. Each paragraph of the abstract shall end with an indication of the military security classification of the information in the paragraph, represented as (TS), (S), (C), or (U).

There is no limitation on the length of the abstract. However, the suggested length is from 150 to 225 words.

14. **KEY WORDS:** Key words are technically meaningful terms or short phrases that characterize a report and may be used as index entries for cataloging the report. Key words must be selected so that no security classification is required. Identifiers, such as equipment model designation, trade name, military project code name, geographic location, may be used as key words but will be followed by an indication of technical context. The assignment of links, rules, and weights is optional.

Abstract

AD _____ Accession _____

Springfield Armory, Springfield, Massachusetts 01101
 BARREL ENDURANCE TEST OF RIFLES, 5.56mm, M16 AND M16A1 - A
 JOINT ARMY-AIR FORCE TEST, P. R. Lundy and C. E. Williams,
 Technical Report A-7711-5000, January 1966, 236 pages
 including tabular data and illustrations.
 AD21: 4430, 25, 0132, 2, 26

DECLASSIFIED REPORT

Twelve rifles, 5.56mm, M16A1 were fired to the end of their barrel
 bore service life. Measurements of the barrel bore were taken
 periodically with an air gage, and an expanding mandrel gage. It
 was determined that the minimum acceptable barrel bore diameter
 would be .2206 inches. The barrel bore was considered serviceable
 for either armory or COMUS use if that diameter had not advanced
 forward of the origin of the rifling further than 3.625 inches.
 Advancement beyond 6.625 inches would constitute complete
 rejection of the barrel. Gage, Barrel Erosion C779792, designed
 by Springfield Armory, is recommended for this purpose. Several
 rifling rods and .22 caliber bore brushes, 1800021, were tested
 and found to be inadequate. It is also recommended that several com-
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1. Barrels, Rifles, 5.56mm, M16, M16A1
2. Erosion, Rifle Barrels
3. Rifles, 5.56mm, M16, M16A1

Abstract

AD _____ Accession _____

Springfield Armory, Springfield, Massachusetts 01101
 BARREL ENDURANCE TEST OF RIFLES, 5.56mm, M16 AND M16A1 - A
 JOINT ARMY-AIR FORCE TEST, P. R. Lundy and C. E. Williams,
 Technical Report A-7711-5000, January 1966, 236 pages
 including tabular data and illustrations.
 AD21: 4430, 25, 0132, 2, 26

DECLASSIFIED REPORT

Twelve rifles, 5.56mm, M16A1 were fired to the end of their barrel
 bore service life. Measurements of the barrel bore were taken
 periodically with an air gage, and an expanding mandrel gage. It
 was determined that the minimum acceptable barrel bore diameter
 would be .2206 inches. The barrel bore was considered serviceable
 for either armory or COMUS use if that diameter had not advanced
 forward of the origin of the rifling further than 3.625 inches.
 Advancement beyond 6.625 inches would constitute complete
 rejection of the barrel. Gage, Barrel Erosion C779792, designed
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